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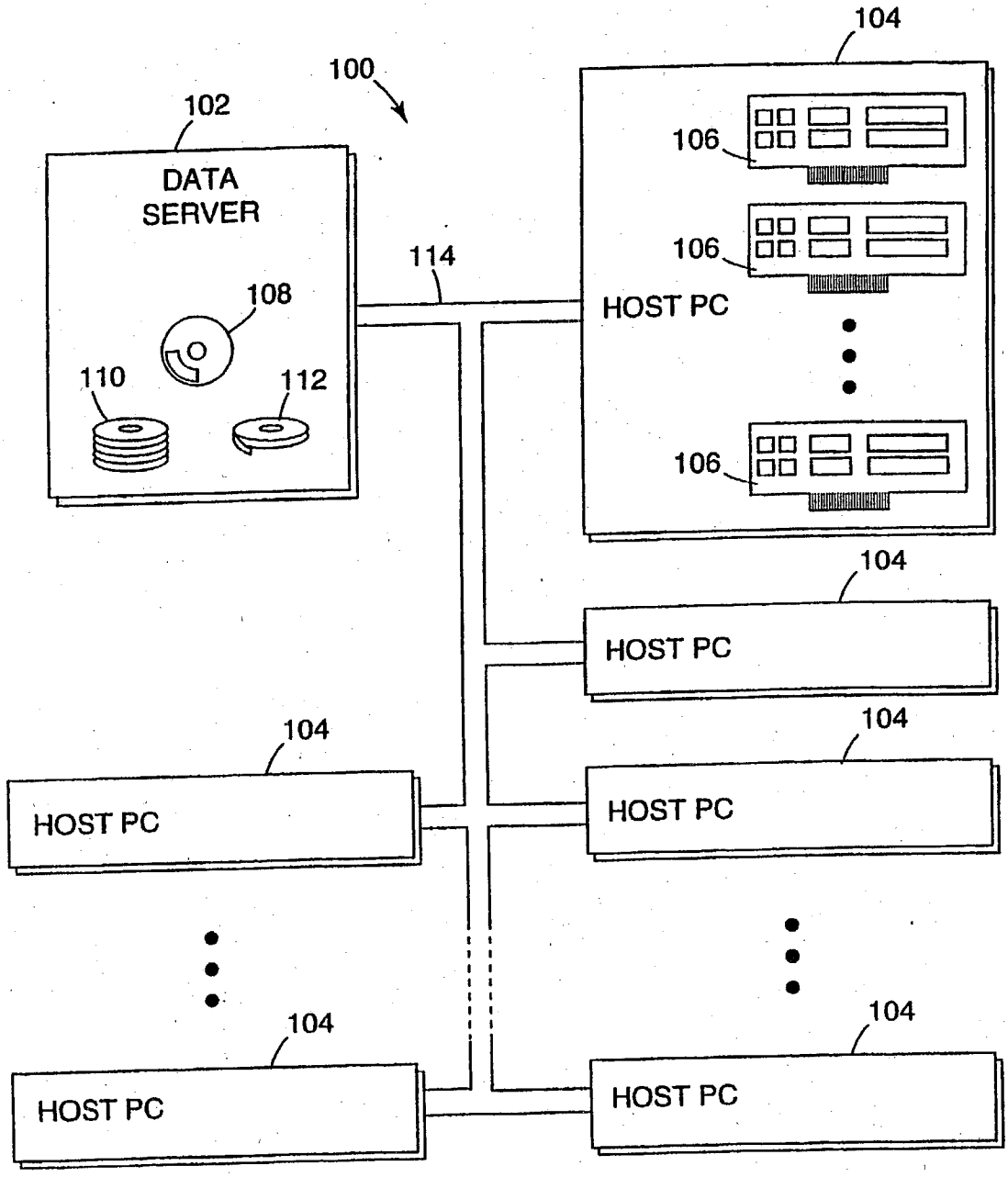

Fig. 1

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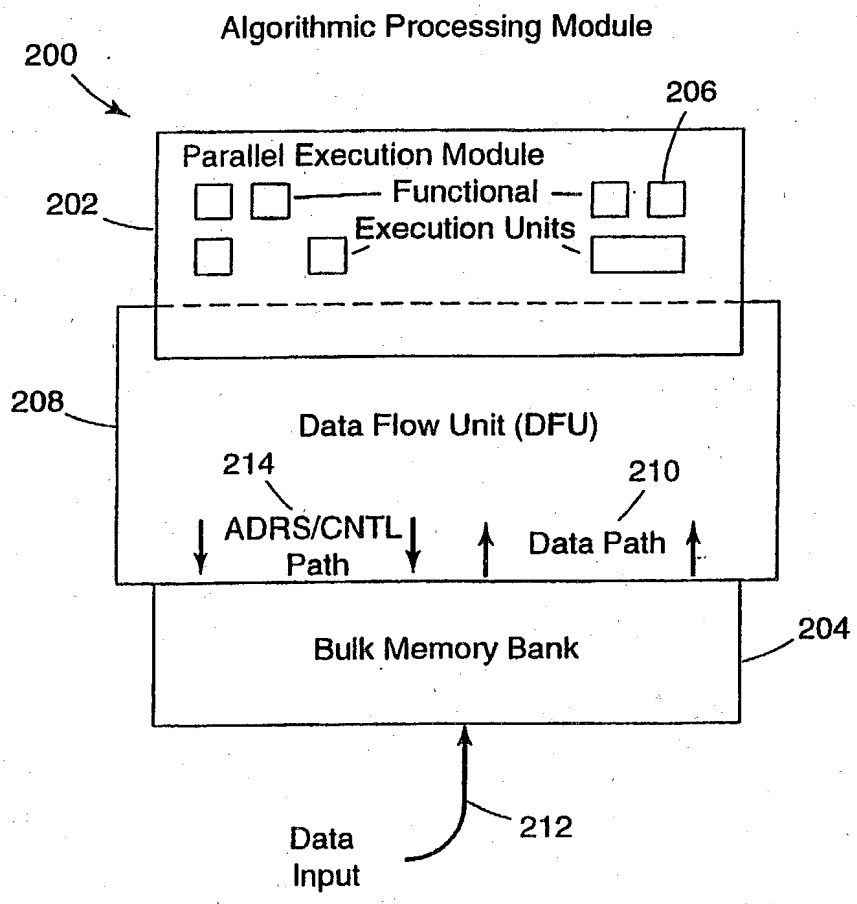

Fig. 2

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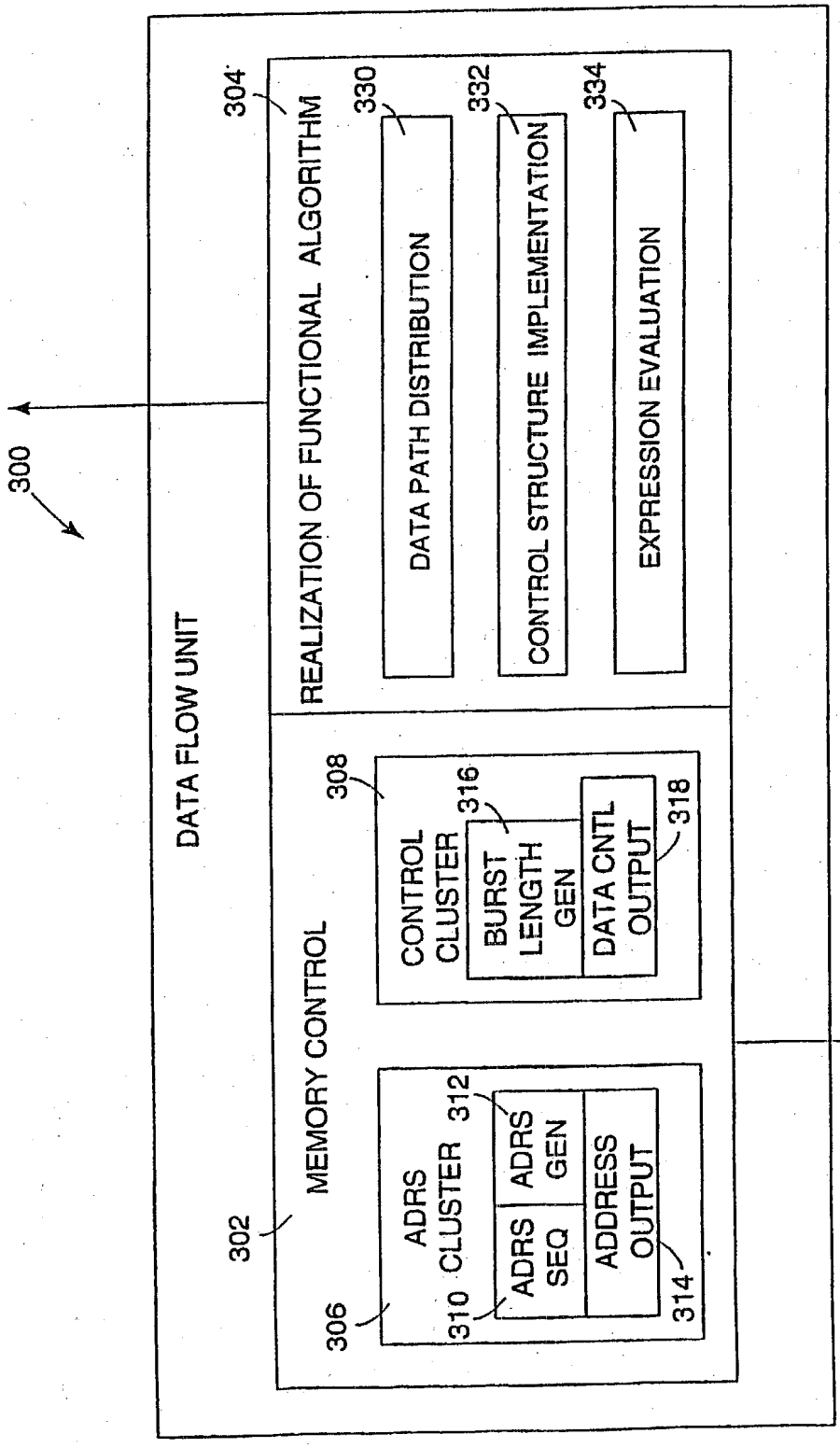

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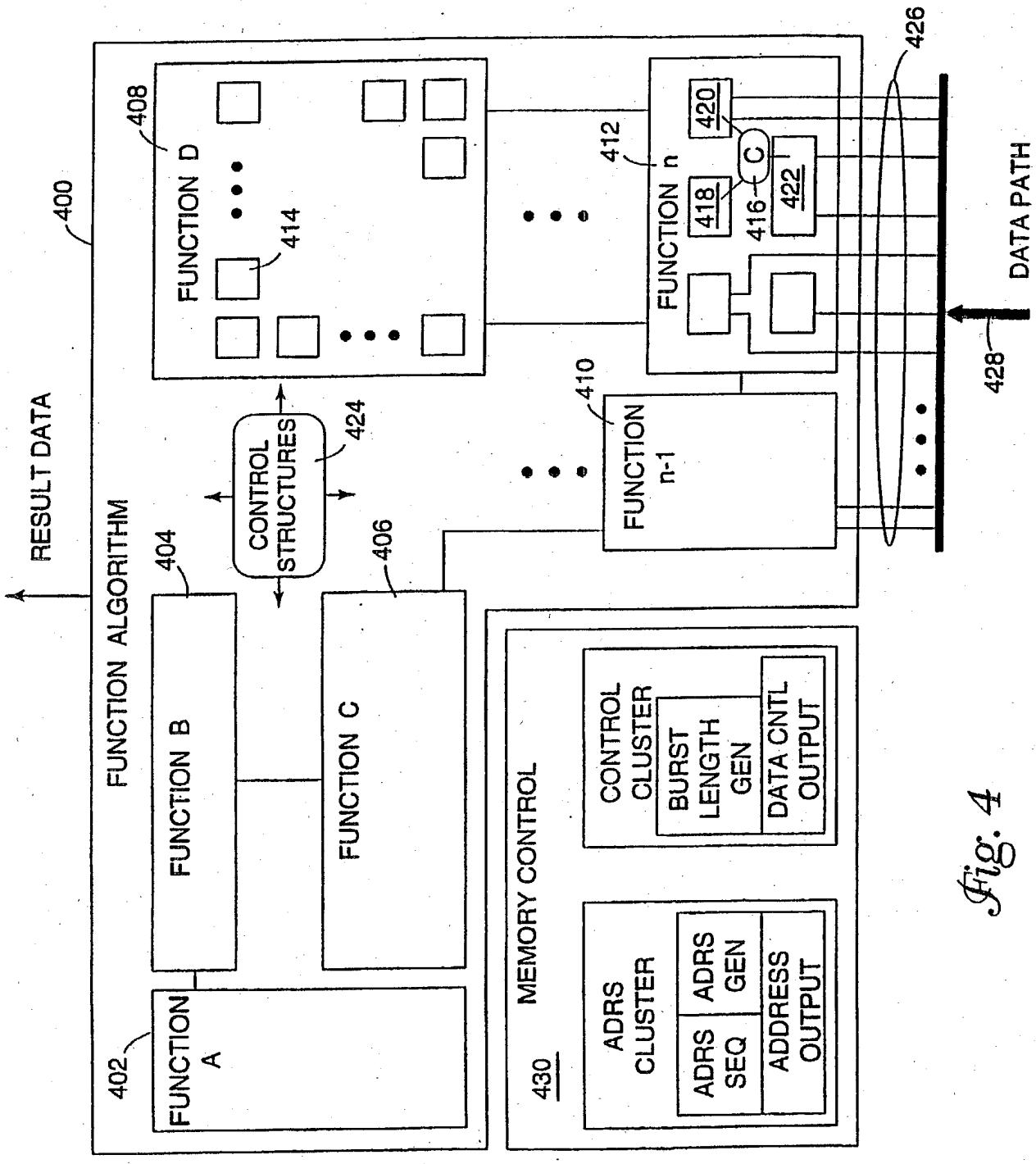

Fig. 4

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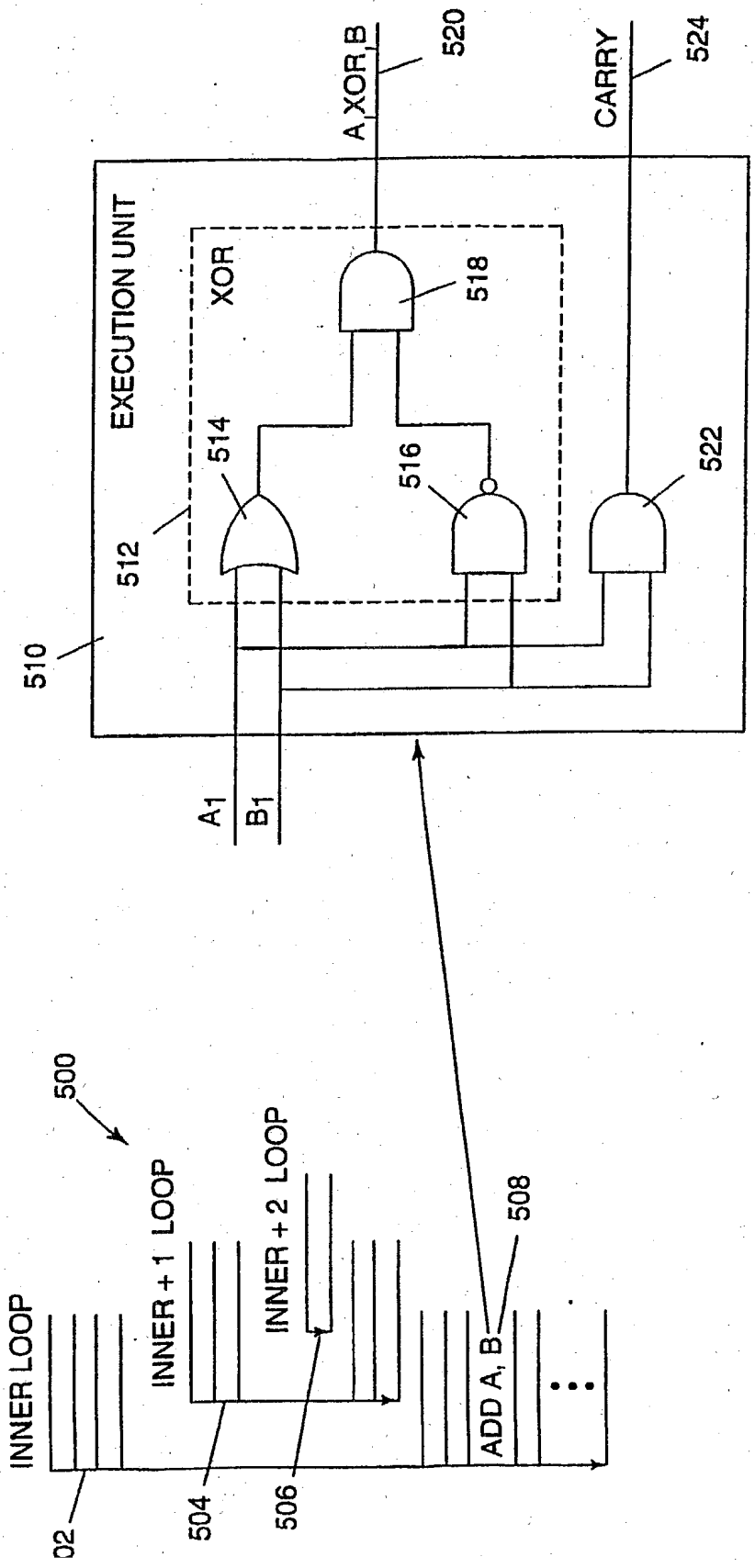


Fig. 5

Fig. 6A

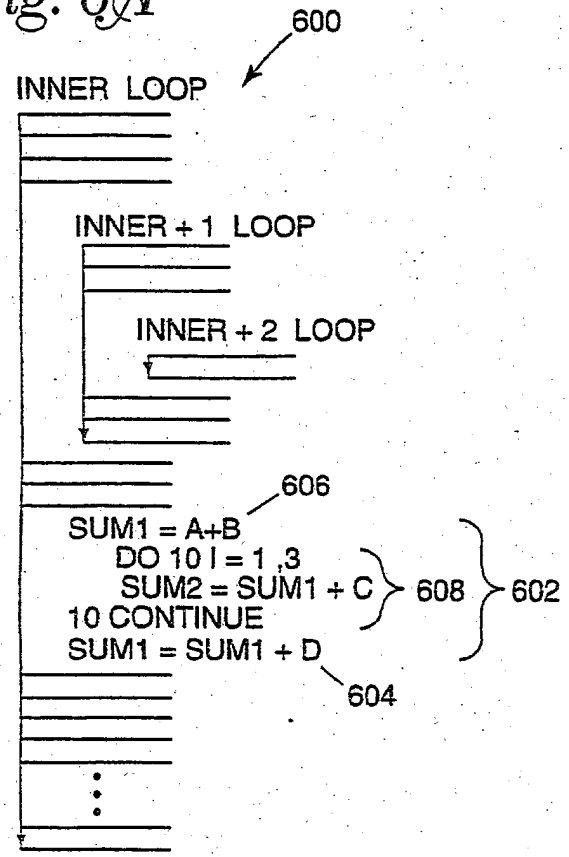


Fig. 6B

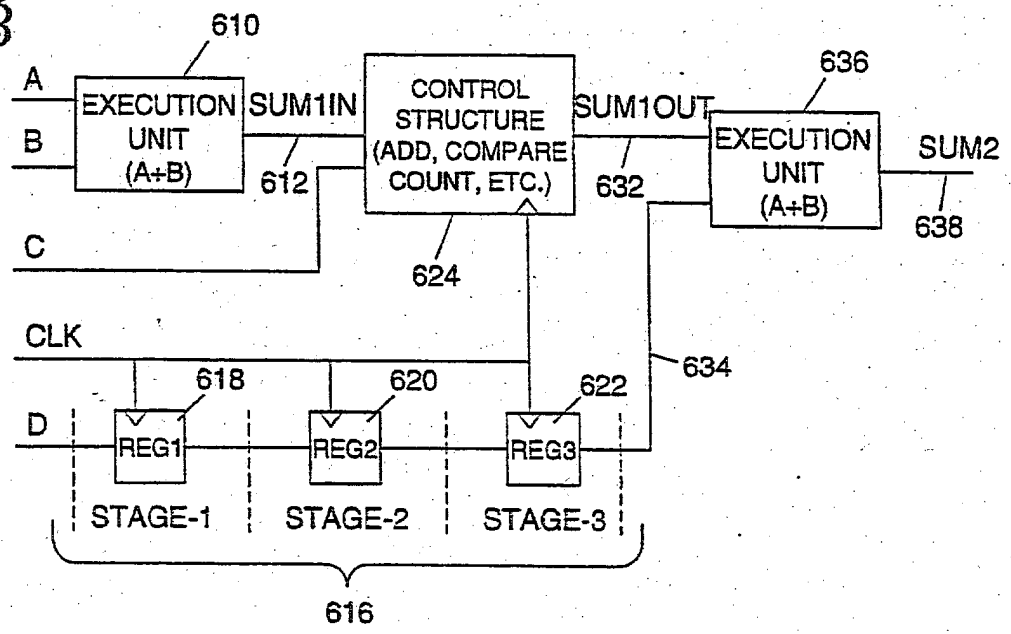
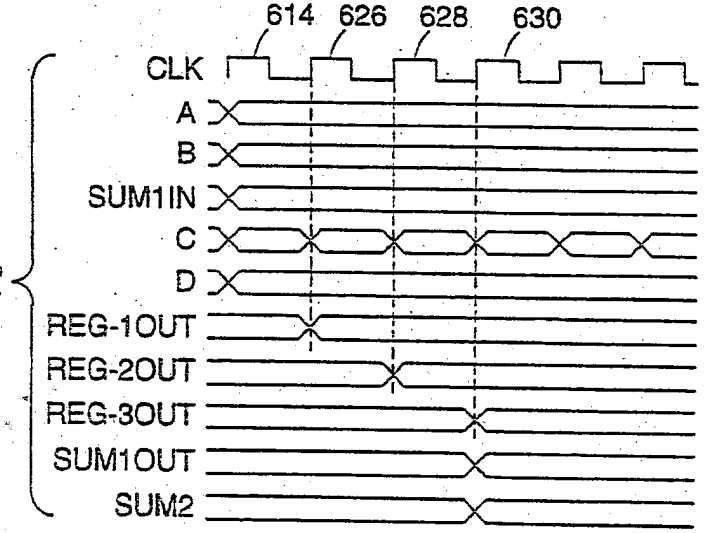


Fig. 6C



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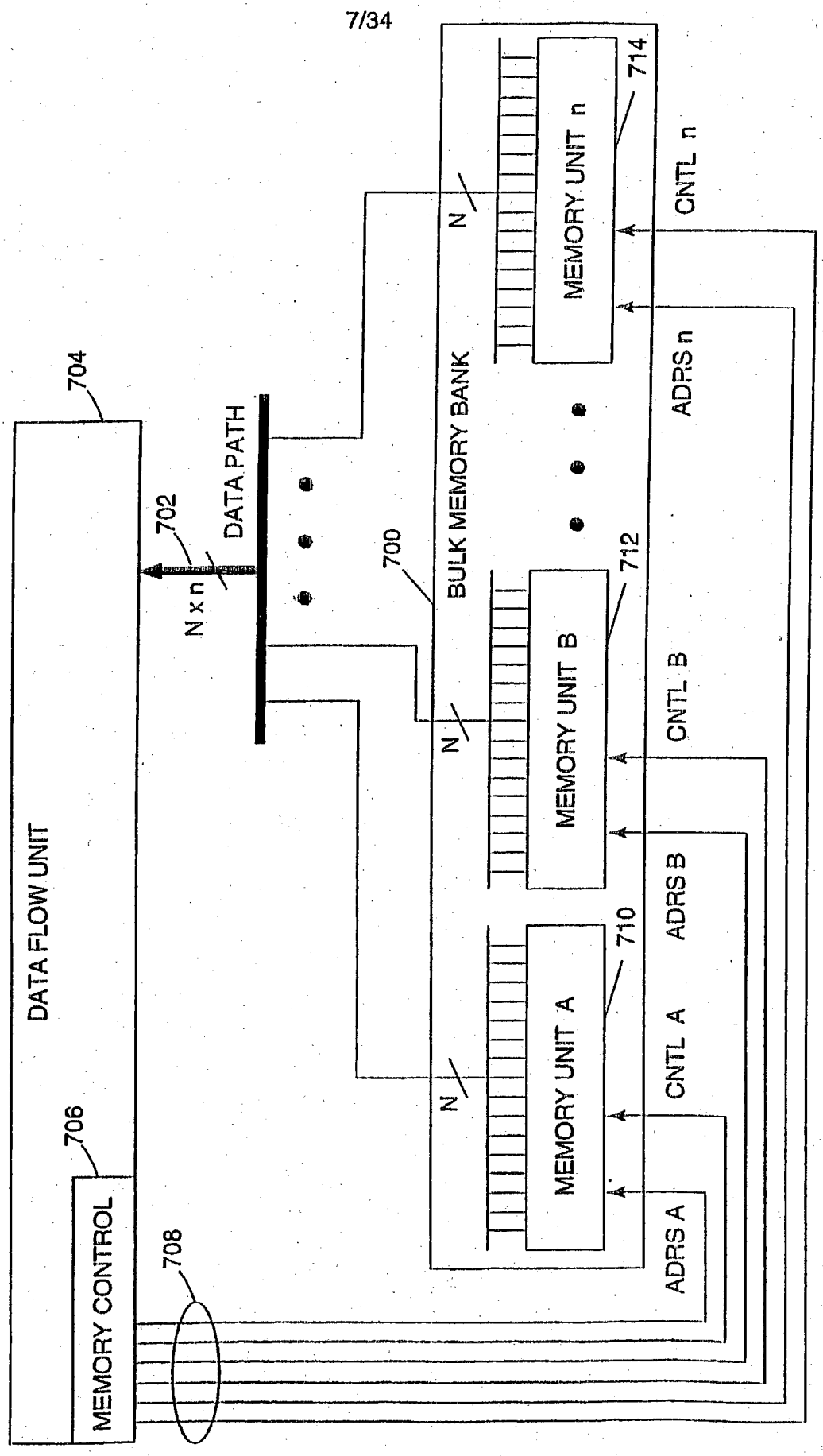

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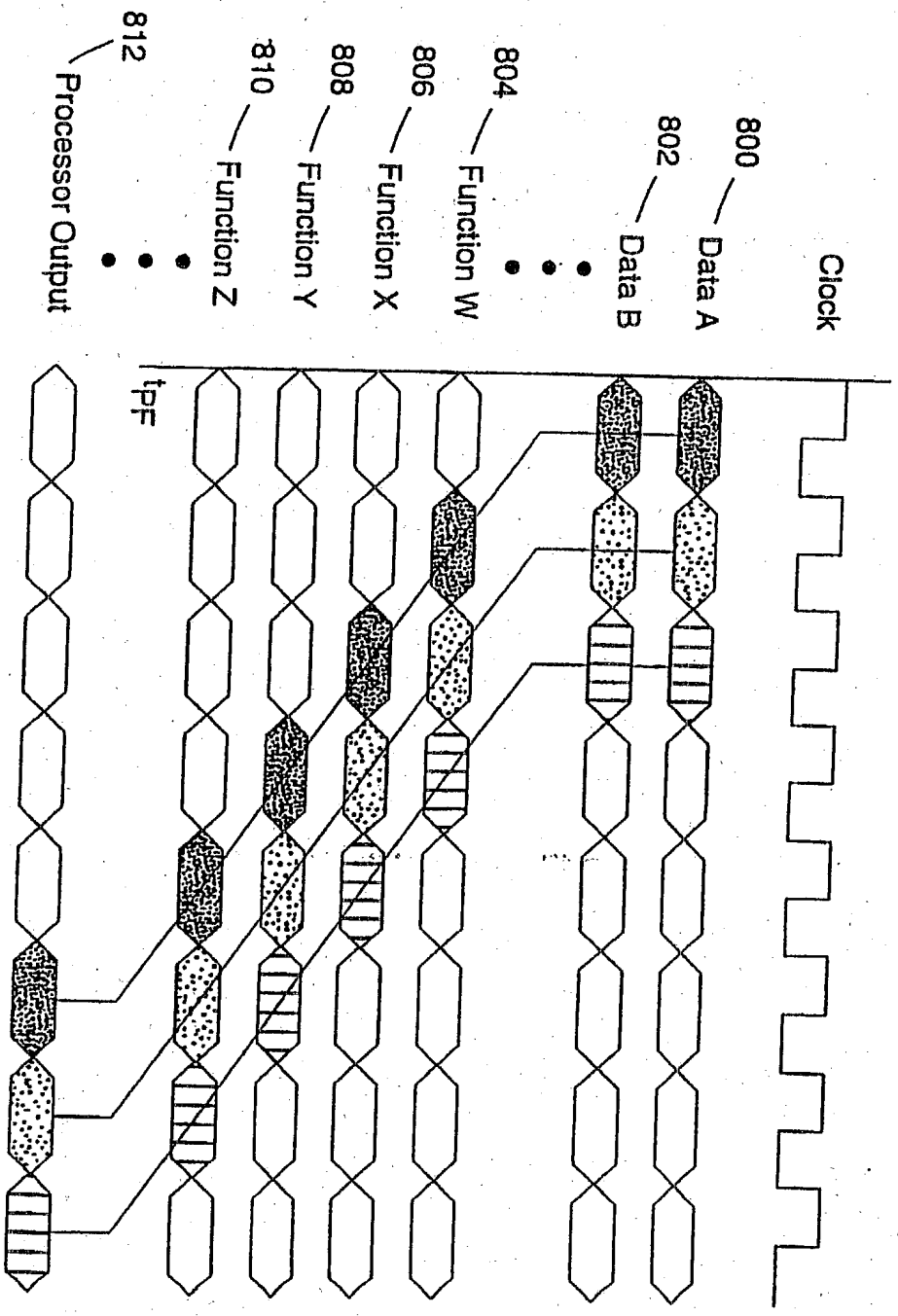
Fig. 8



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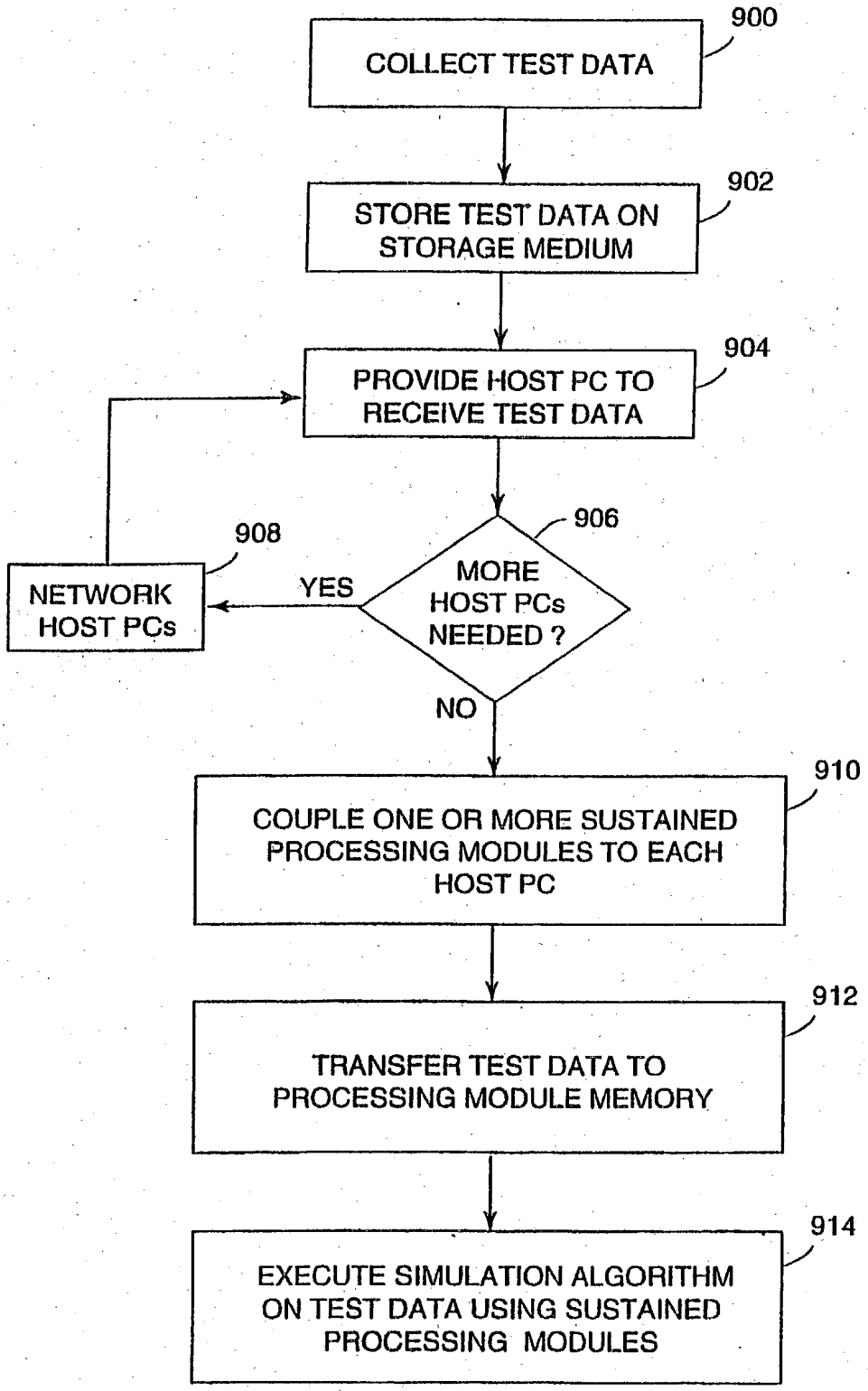

Fig. 9

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```
      SUBROUTINE AVERAGE (INDATA, COUNT, MAX, MIN, AVG, RMS)

            INTEGER COUNT
            REAL INDATA (COUNT), MAX, MIN, AVG, RMS                    1000
C
C     These are the inputs and outputs to the function
C     name      type      mode      length      description
C     ====      ====      ====      ======      ========
C
C     INDATA    R         In        COUNT       Array of input values
C     COUNT     I         In                    Number of values to average
C     MAX       R         InOut                 Maximum value found
C     MIN       R         InOut                 Minimum value found
C     AVG       R         Out                   Average of all values
C     RMS       R         Out                   Root-Mean-Square of all values
C
            REAL SUM, RMSSUM                                           1002
            INTEGER I
C     These are internal variables

C     Initialization of internal variables
            SUM = 0.0                                                  1004
            RMSSUM = 0.0

C     Main Loop proper
            DO 100  = 1,  COUNT                                        1006
              IF (INDATA (I)  .LT. MIN) THEN                           1008
                MIN =  INDATA (I)
              ENDIF
              IF (INDATA (I)  .GT. MAX) THEN                           1010
                MAX =  INDATA (I)
              ENDIF
            SUM = SUM + INDATA (I)                                     1012
            RMSSUM = RMSSUM + INDATA (I)  *  INDATA (I)                1014
        100 CONTINUE
C     End of main loop

C     Calculate  average, RMS                                          1016
            AVG = SUM / COUNT
            RMSSUM = SQRT (RMSSUM / COUNT)
            END                                                        1018
```

Fig. 10

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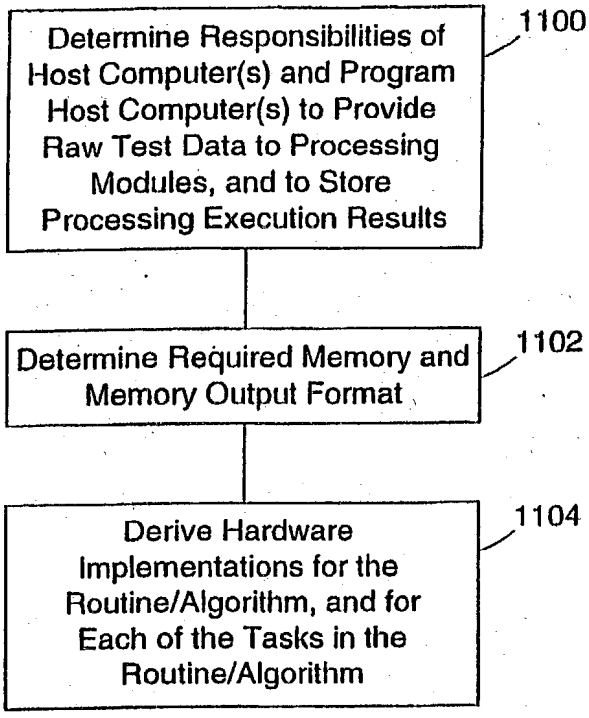

Fig. 11

Fig. 12

```
IF (INDATA (I) .LT. MIN) THEN
      MIN = INDATA (I)
ENDIF
```

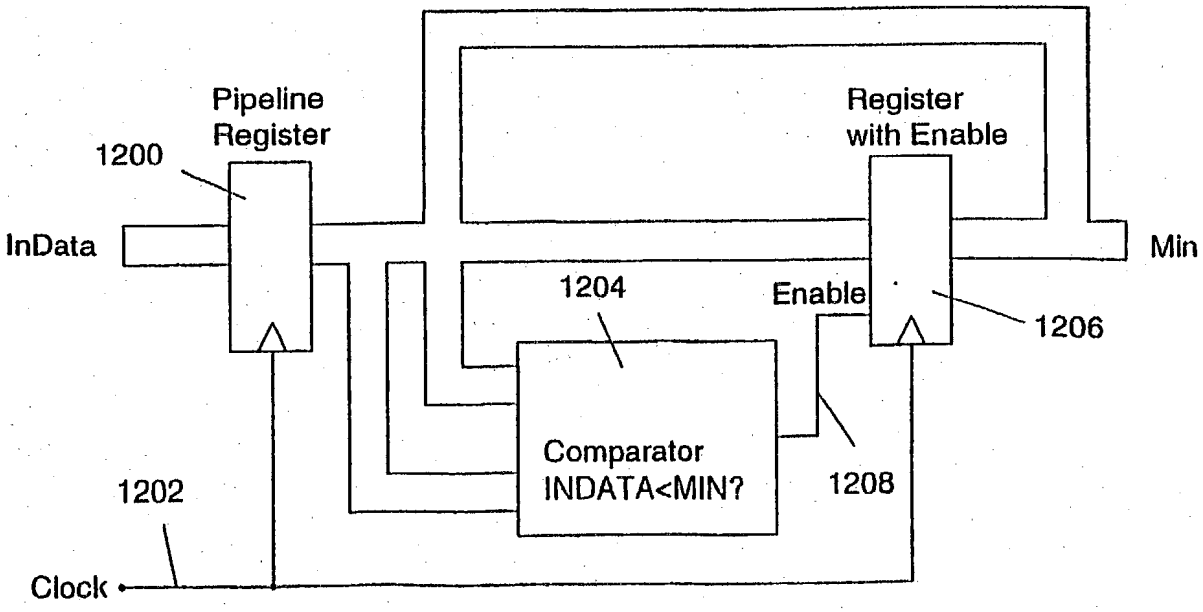

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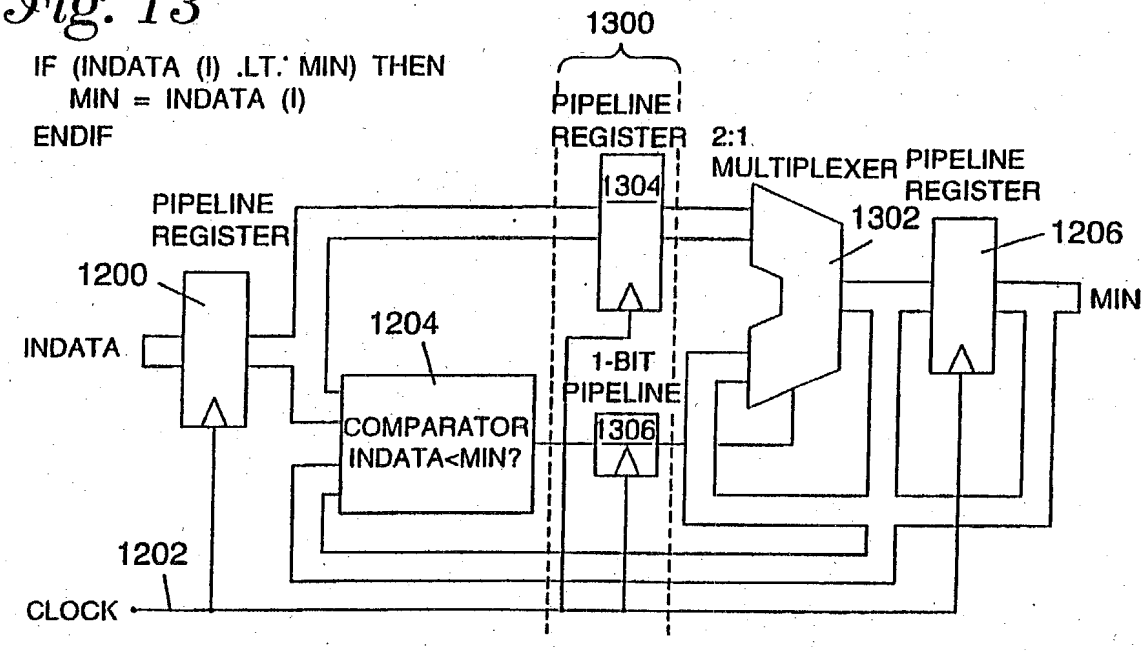
Fig. 13



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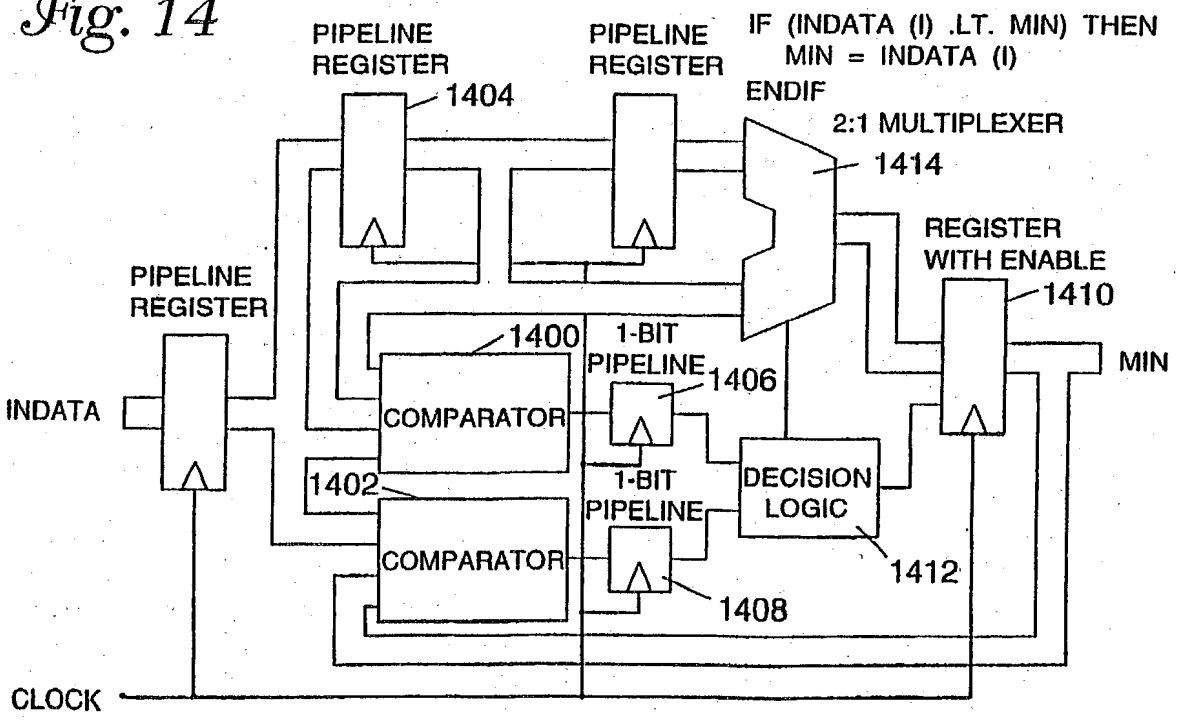

Sheet: 13 of 34
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Fig. 15

SUM = SUM + INDATA (I)

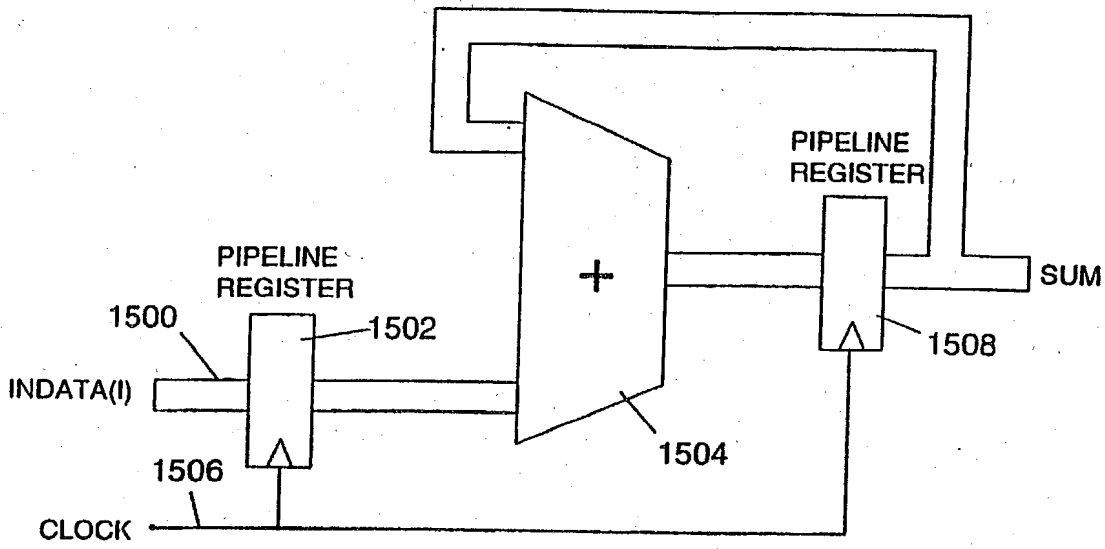

Fig. 16

RMSSUM = RMSSUM + INDATA (I) * INDATA (I)

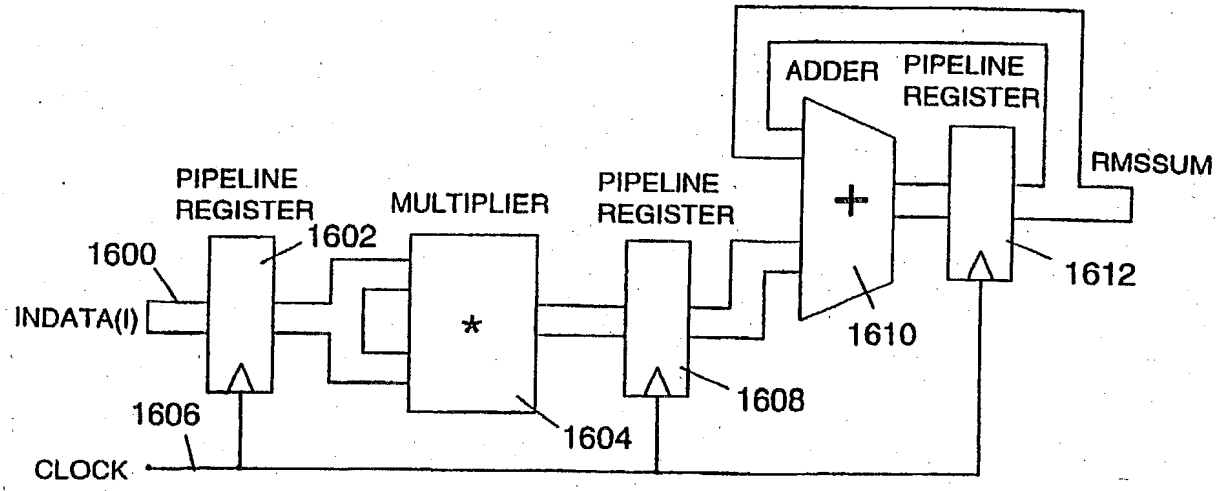

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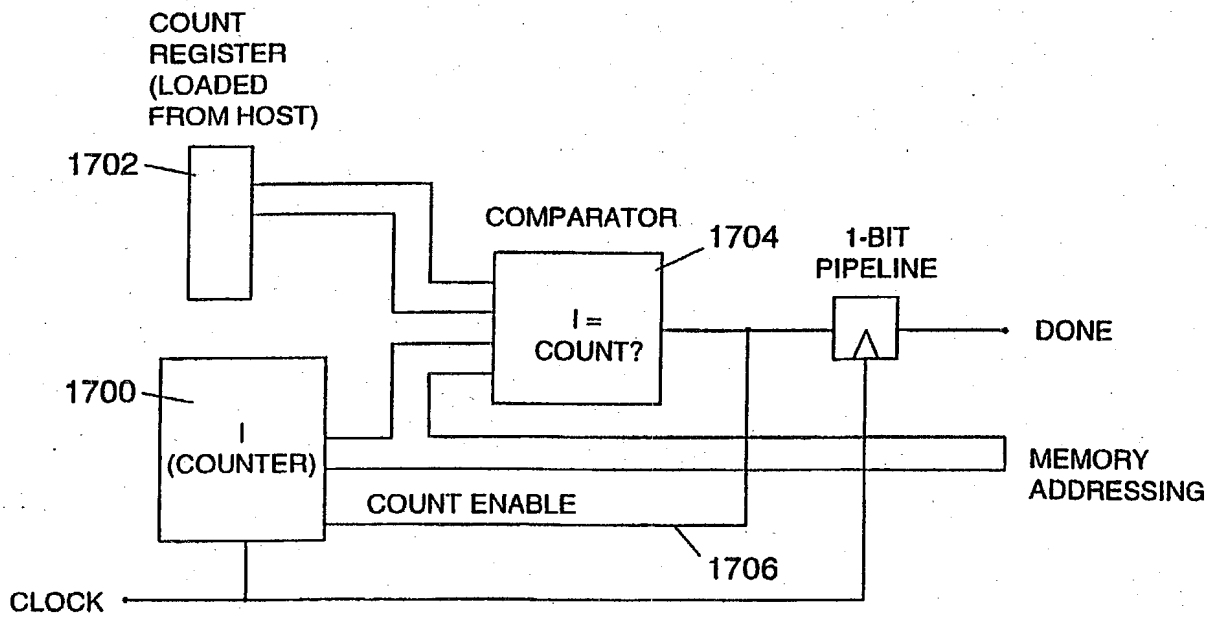
Fig. 17



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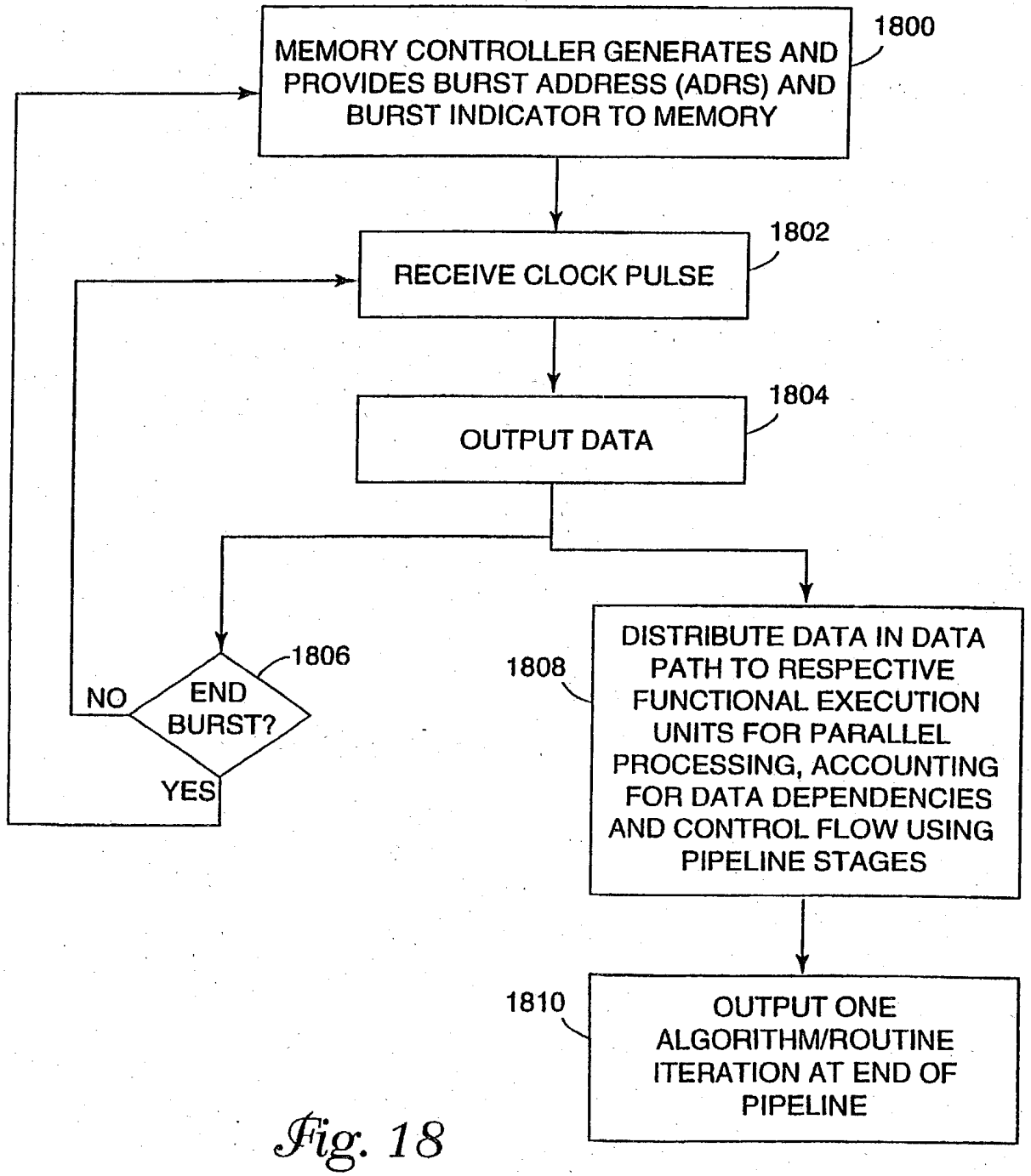

Fig. 18

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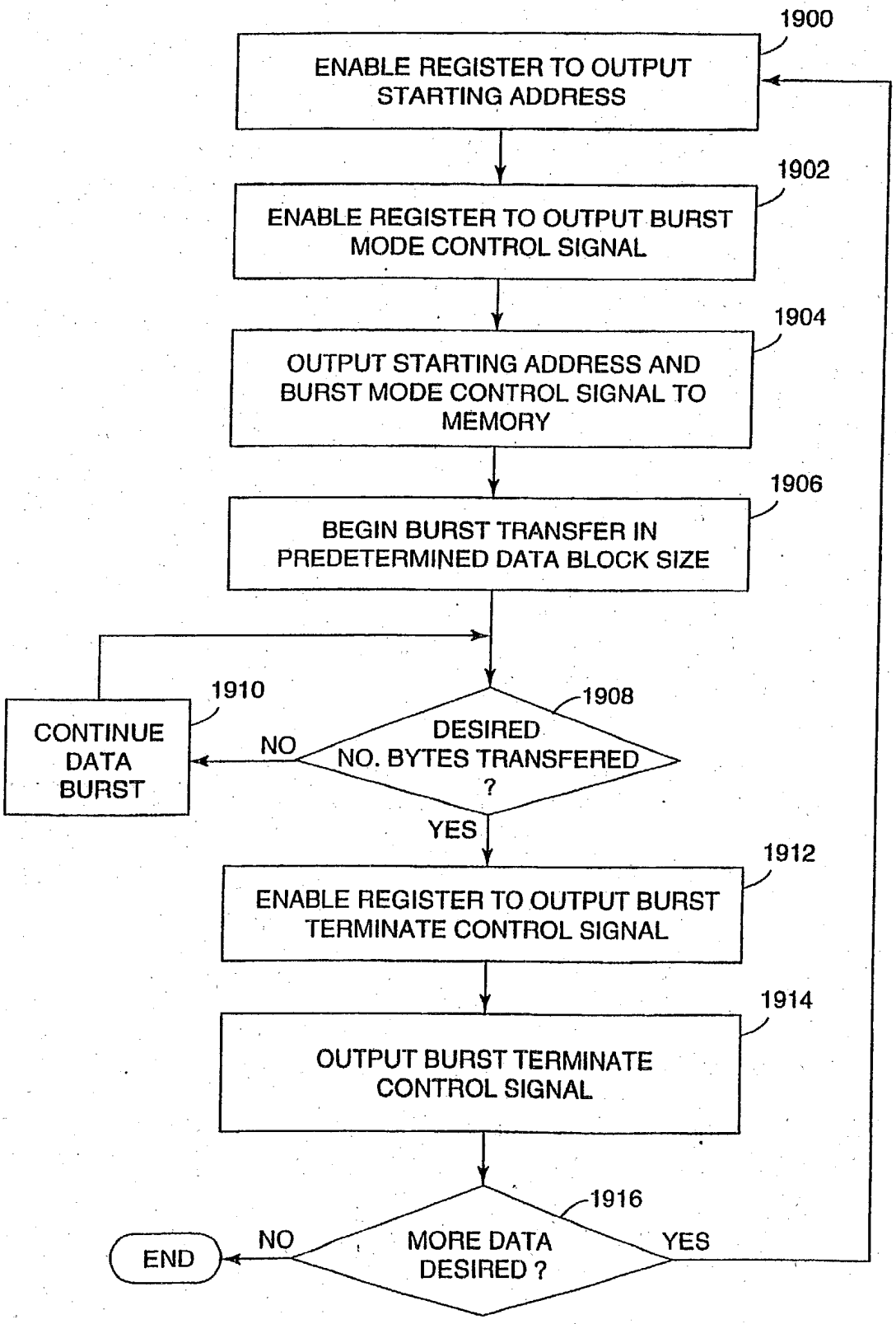

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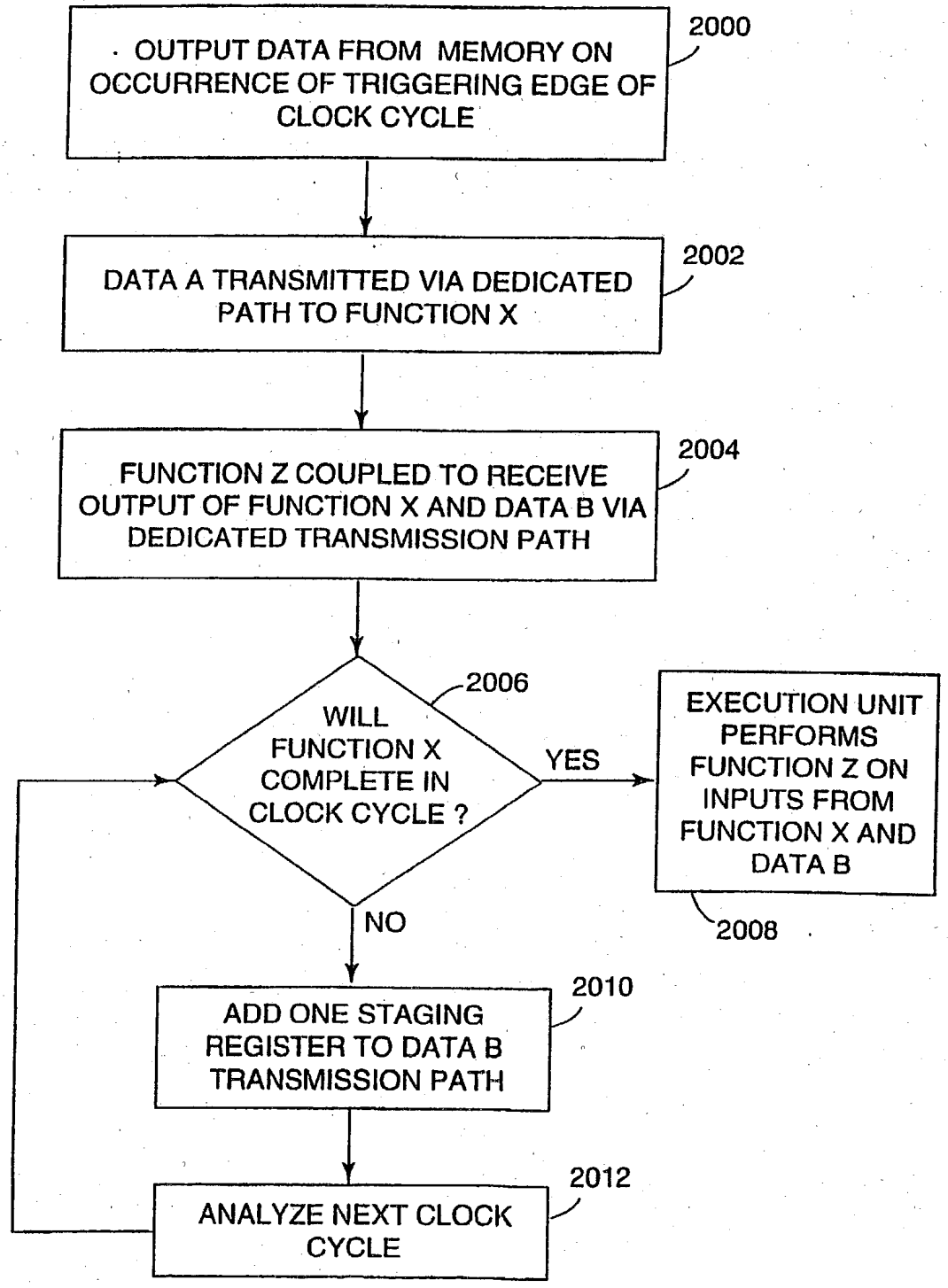

Fig. 20

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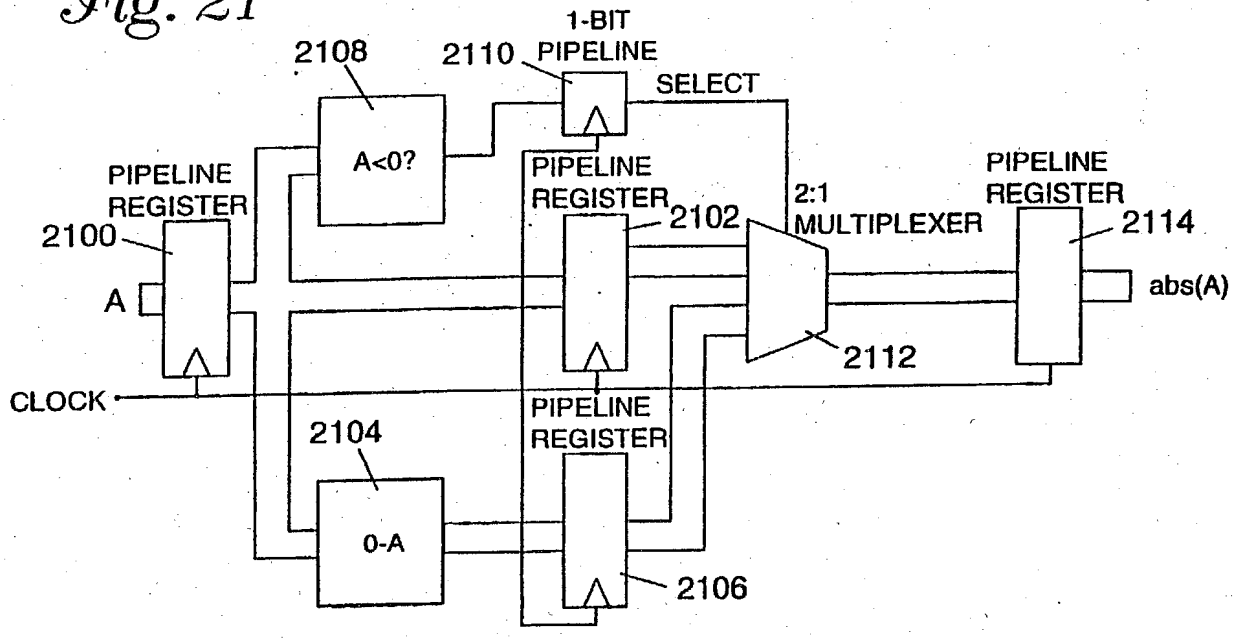
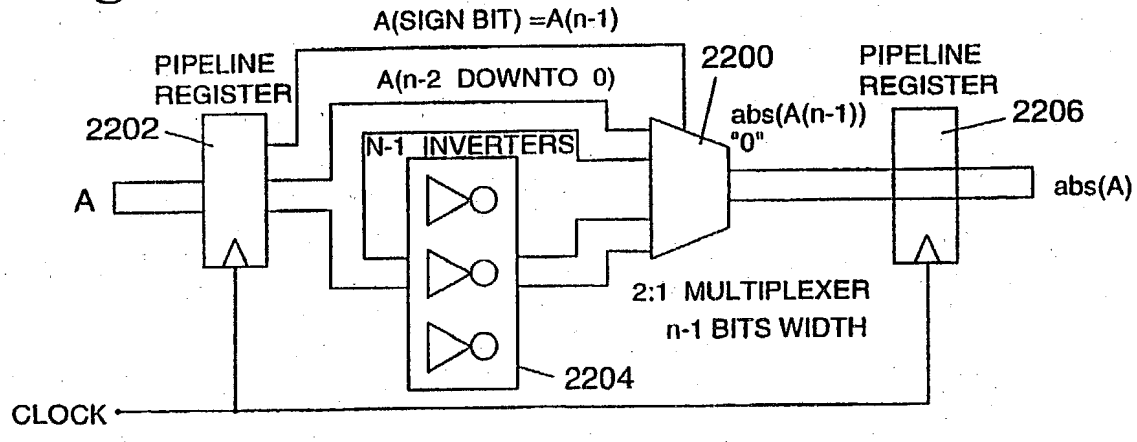
Fig. 21



abs(a) NAIVE HARDWARE IMPLEMENTATION - 2 CYCLES

Fig. 22 Note:- A width = N bits



abs(a) FASTER IMPLEMENTATION - 1 CYCLE

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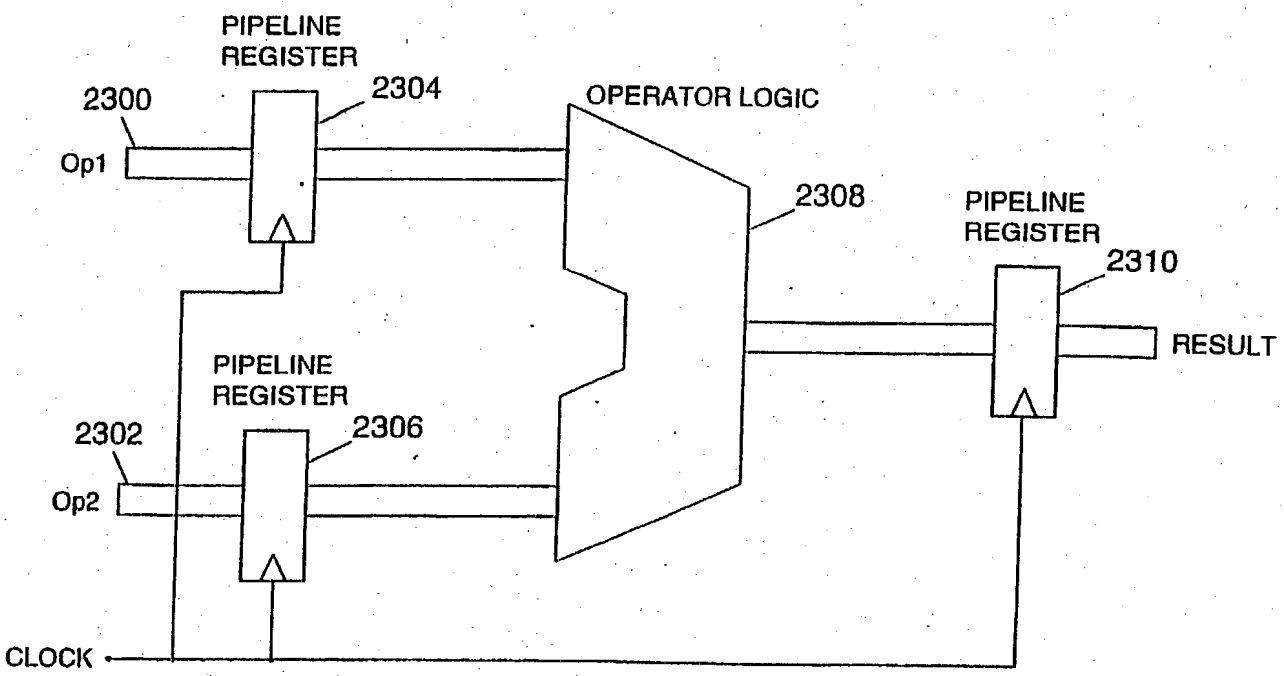

Fig. 23 BINARY OPERATOR

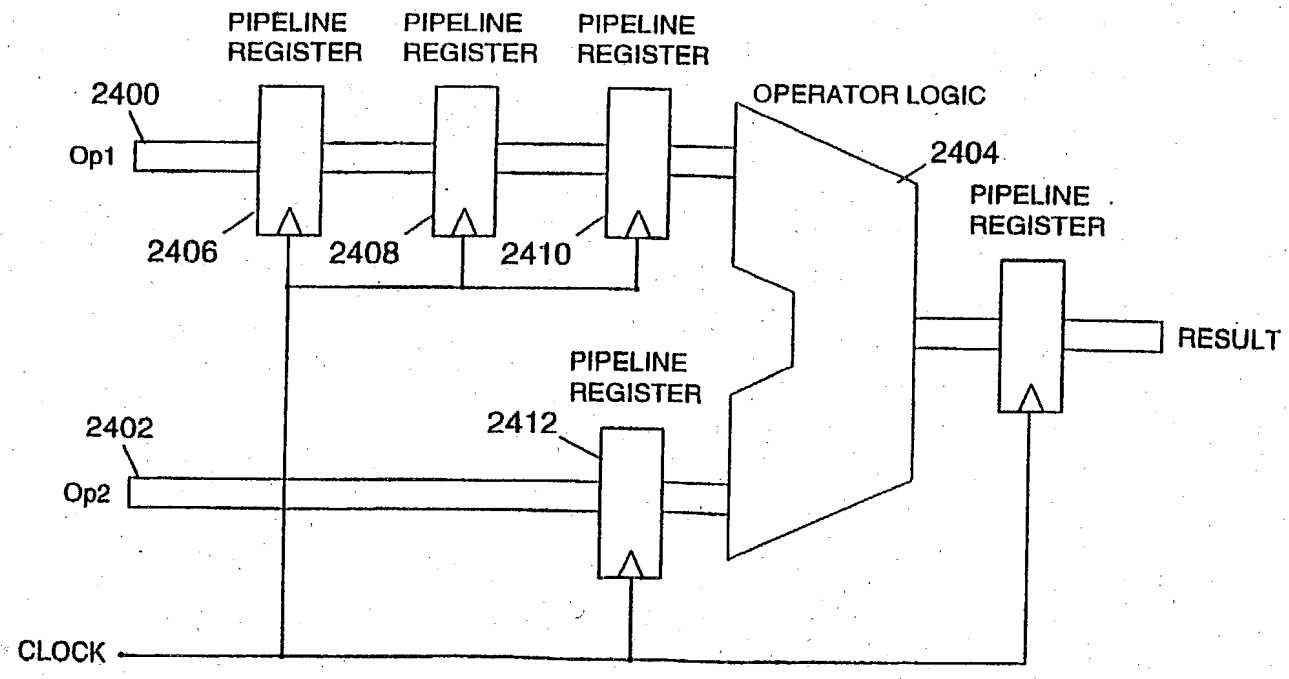

Fig. 24 BINARY OPERATOR WITH ONE EARLY OPERAND

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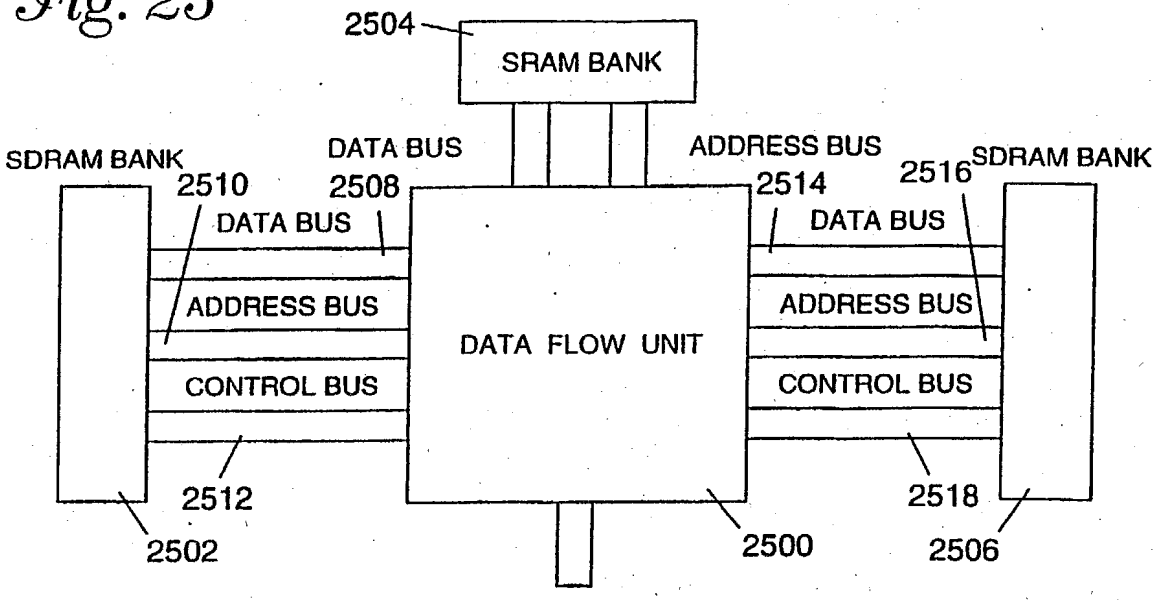
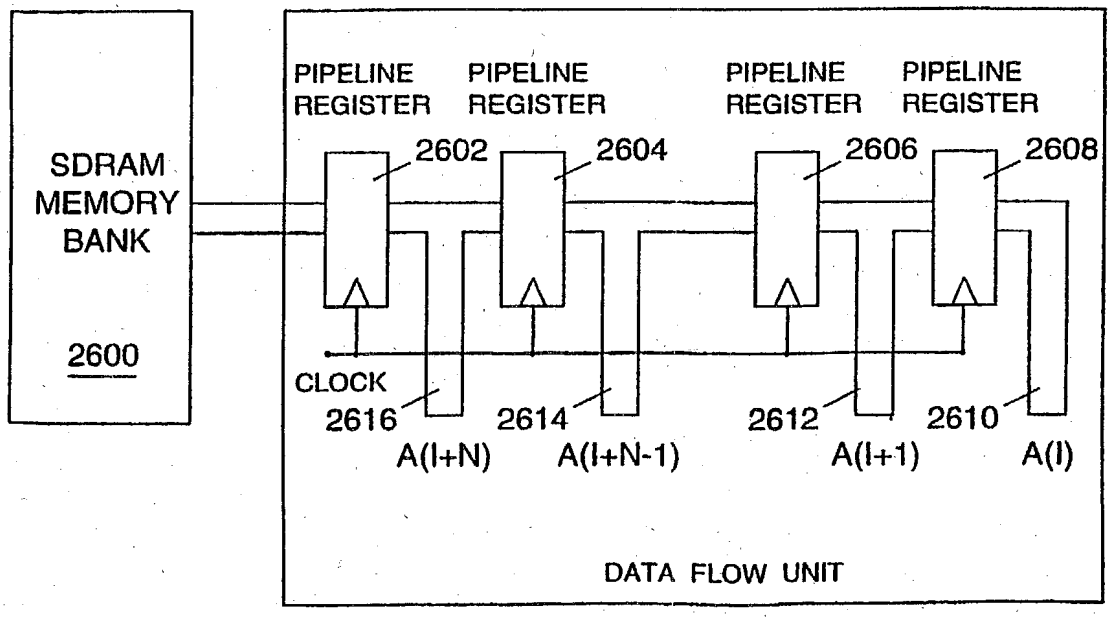
Fig. 25



PCI BUS HOST INTERFACE

TYPICAL SYSTEM BLOCK DIAGRAM

Fig. 26



PIPELINING TO REDUCE MEMORY ACCESSES.

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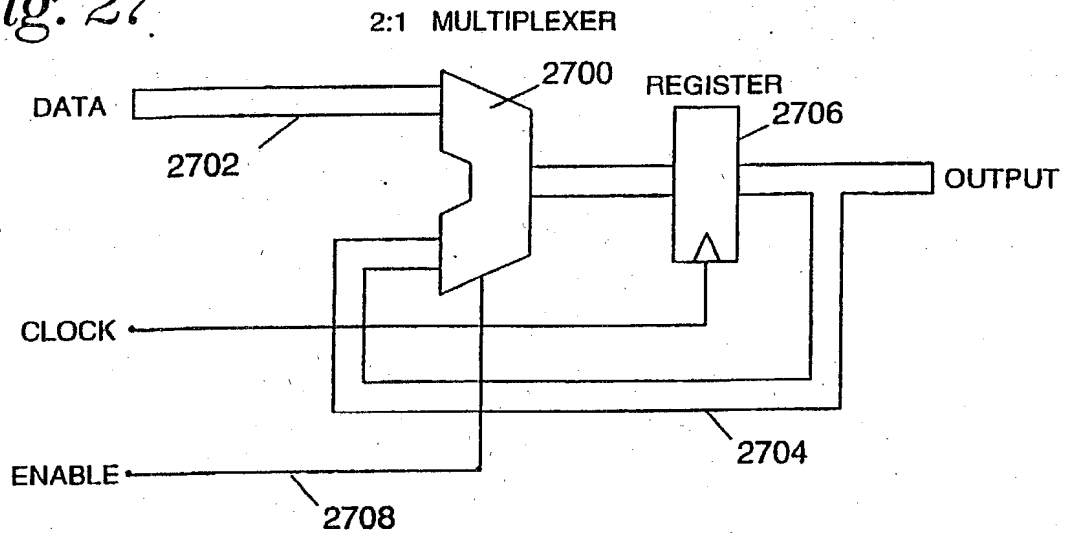
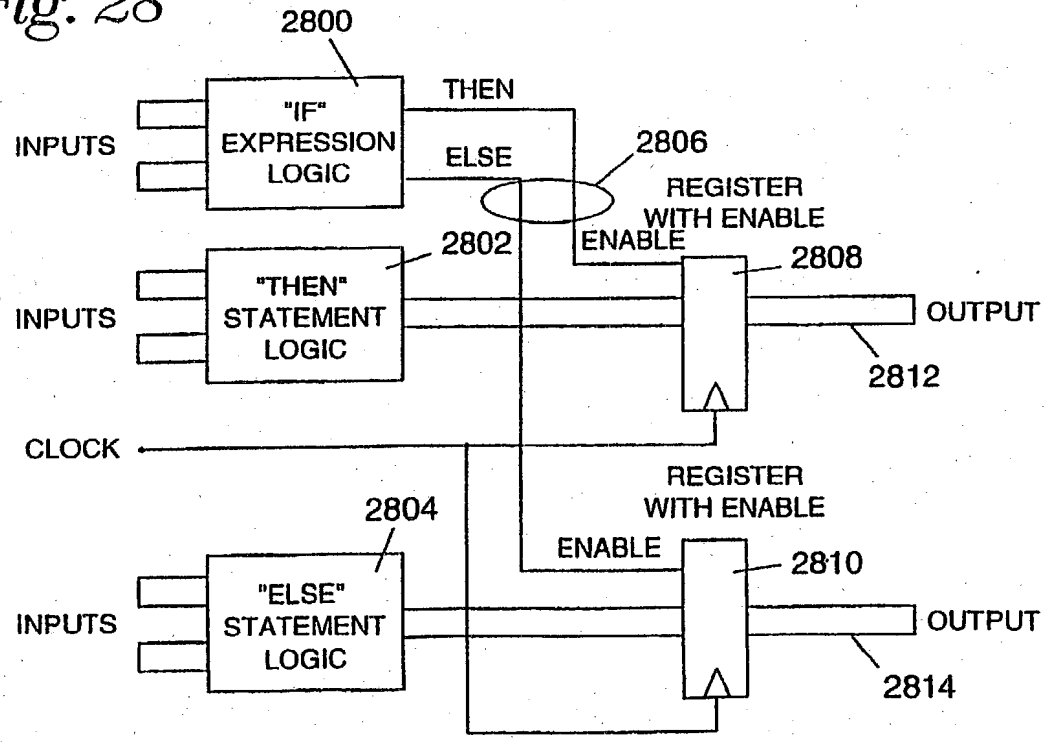
Fig. 27



IMPLEMENTATION OF REGISTER WITH ENABLE

Fig. 28



HARDWARE IMPLEMENTATION OF CONDITIONAL STATEMENT.

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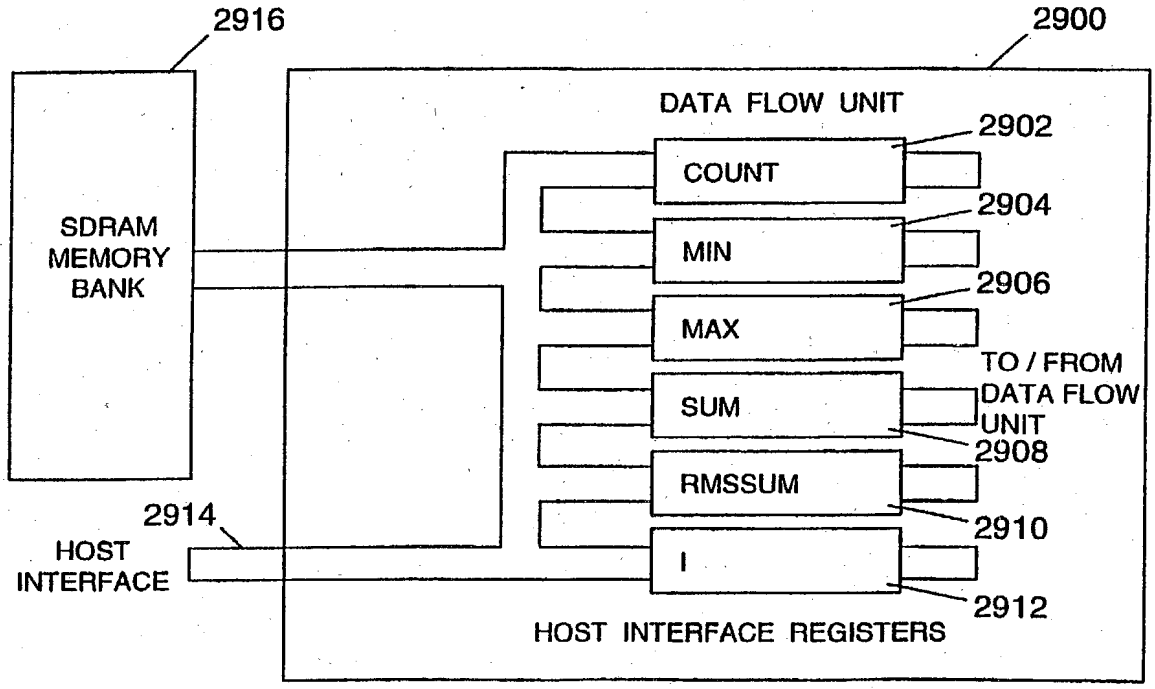
Fig. 29



EXAMPLE HOST INTERFACE/ PROGRAMMING MODEL

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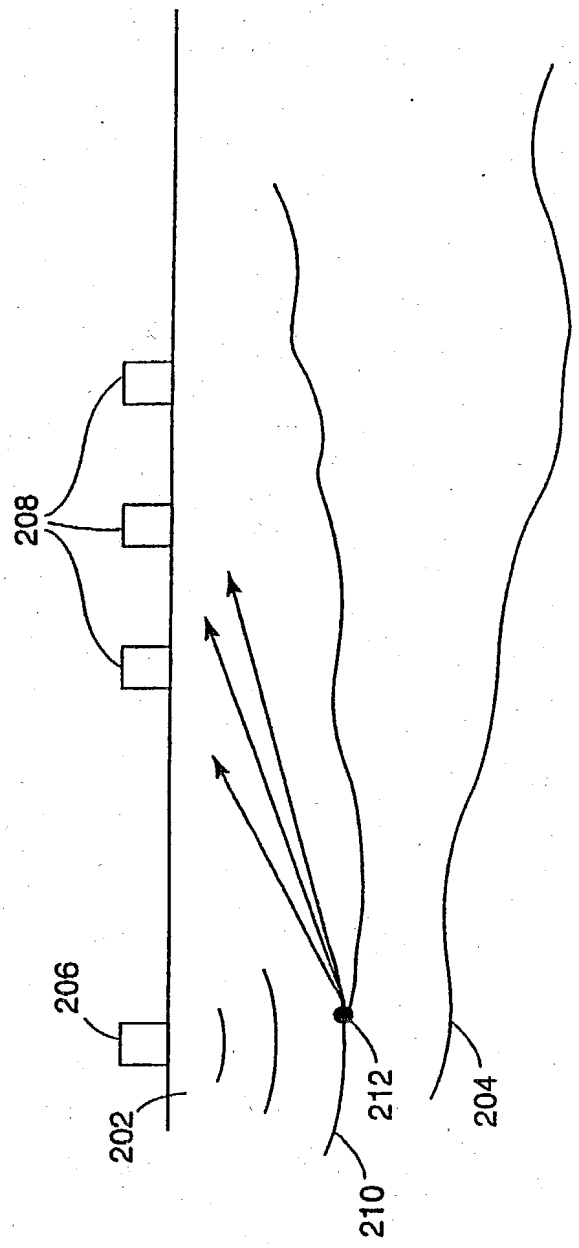

Fig. 30

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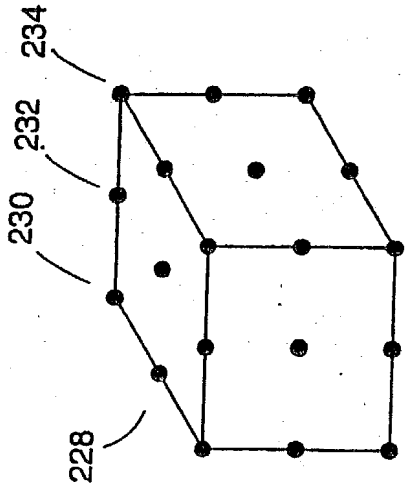

Fig. 31b

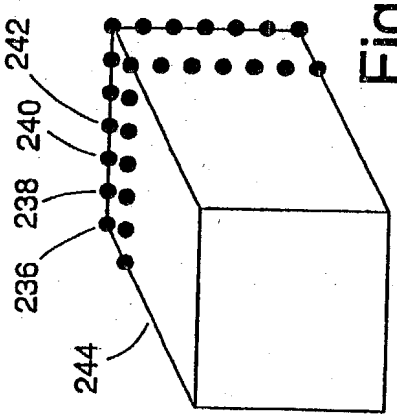

Fig. 31c

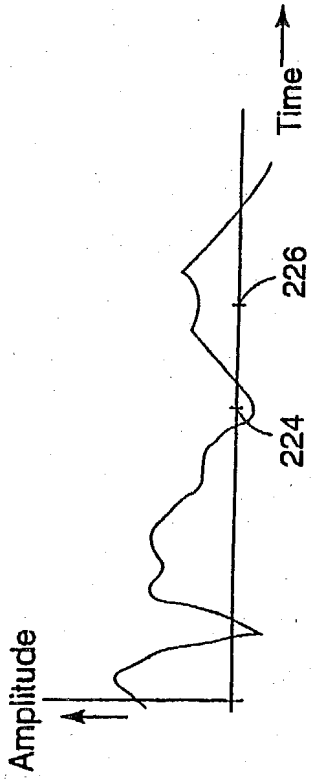

Fig. 31a

Sheet: 26 of 37
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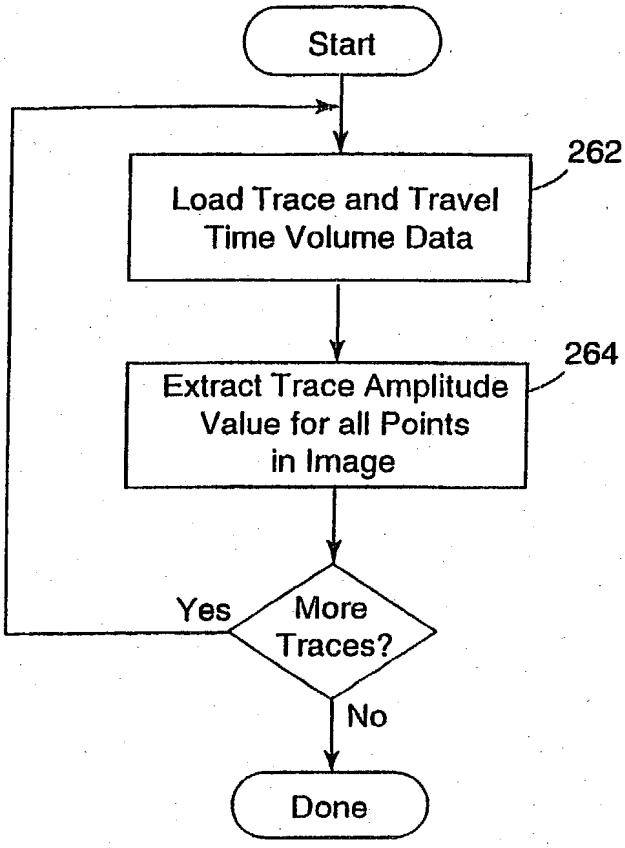

Fig. 32

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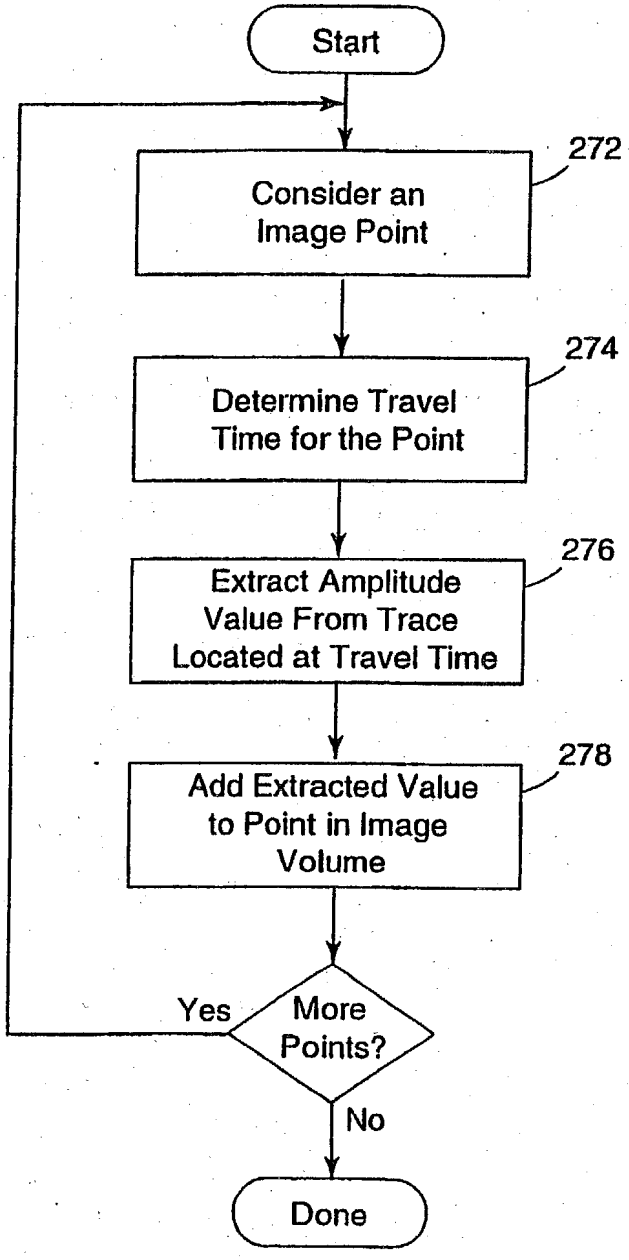

Fig. 33

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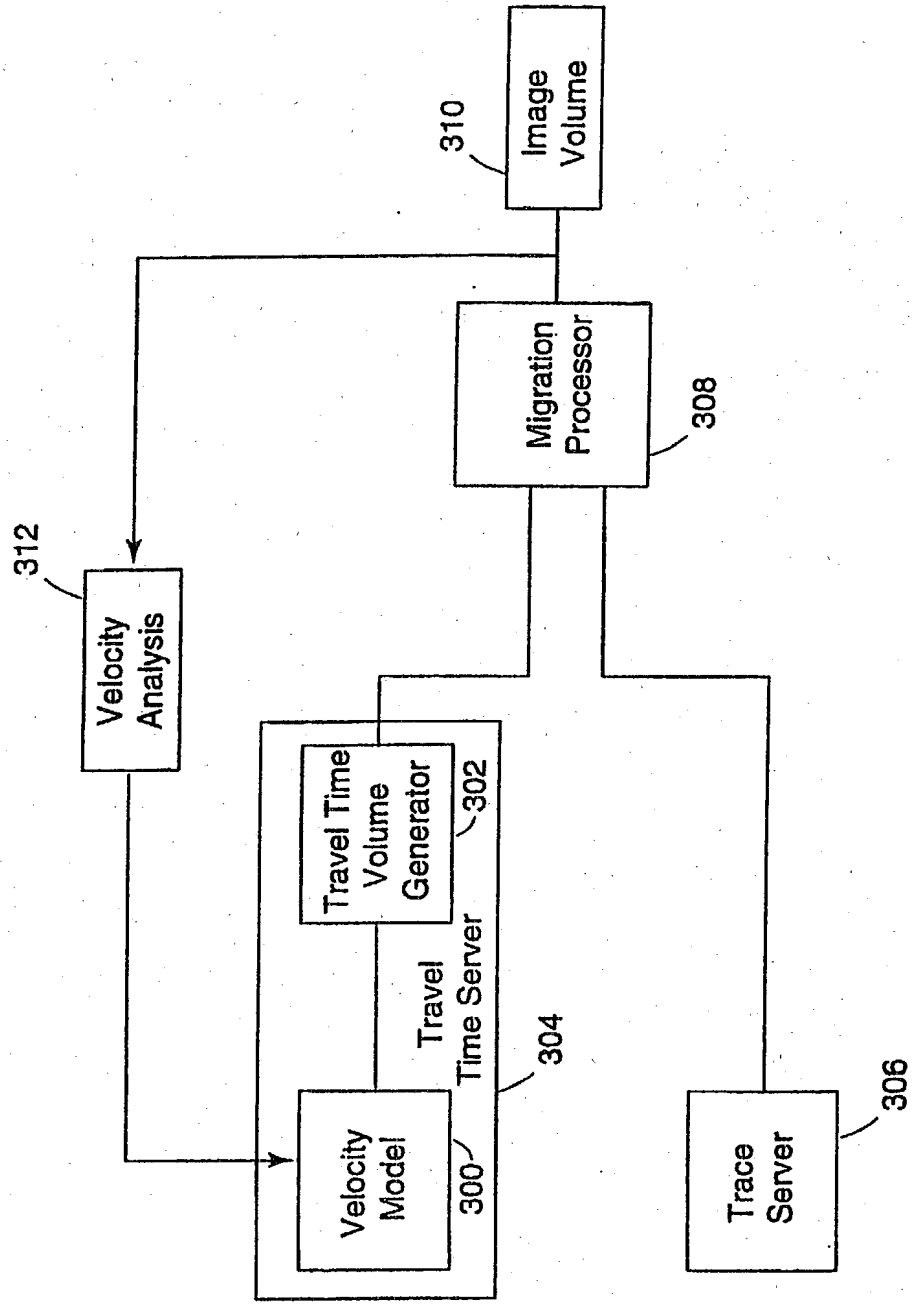

Fig. 34

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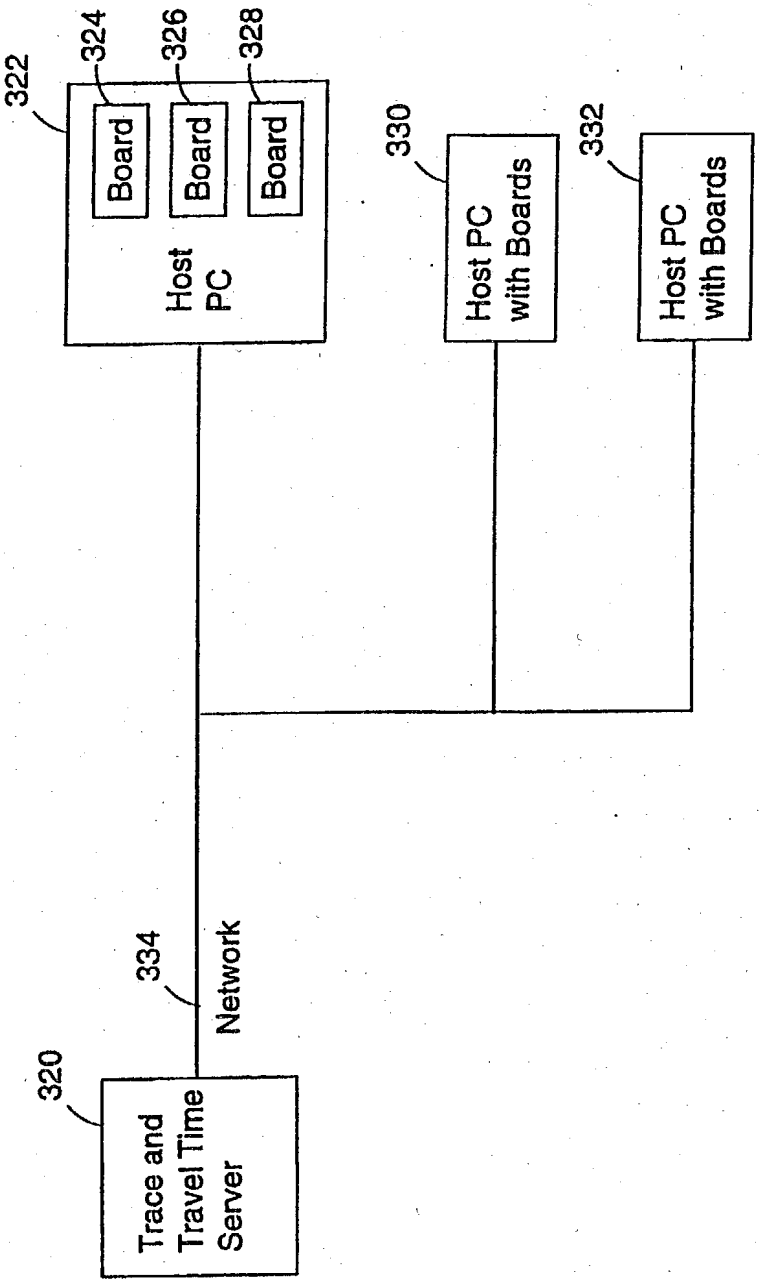

Fig. 35

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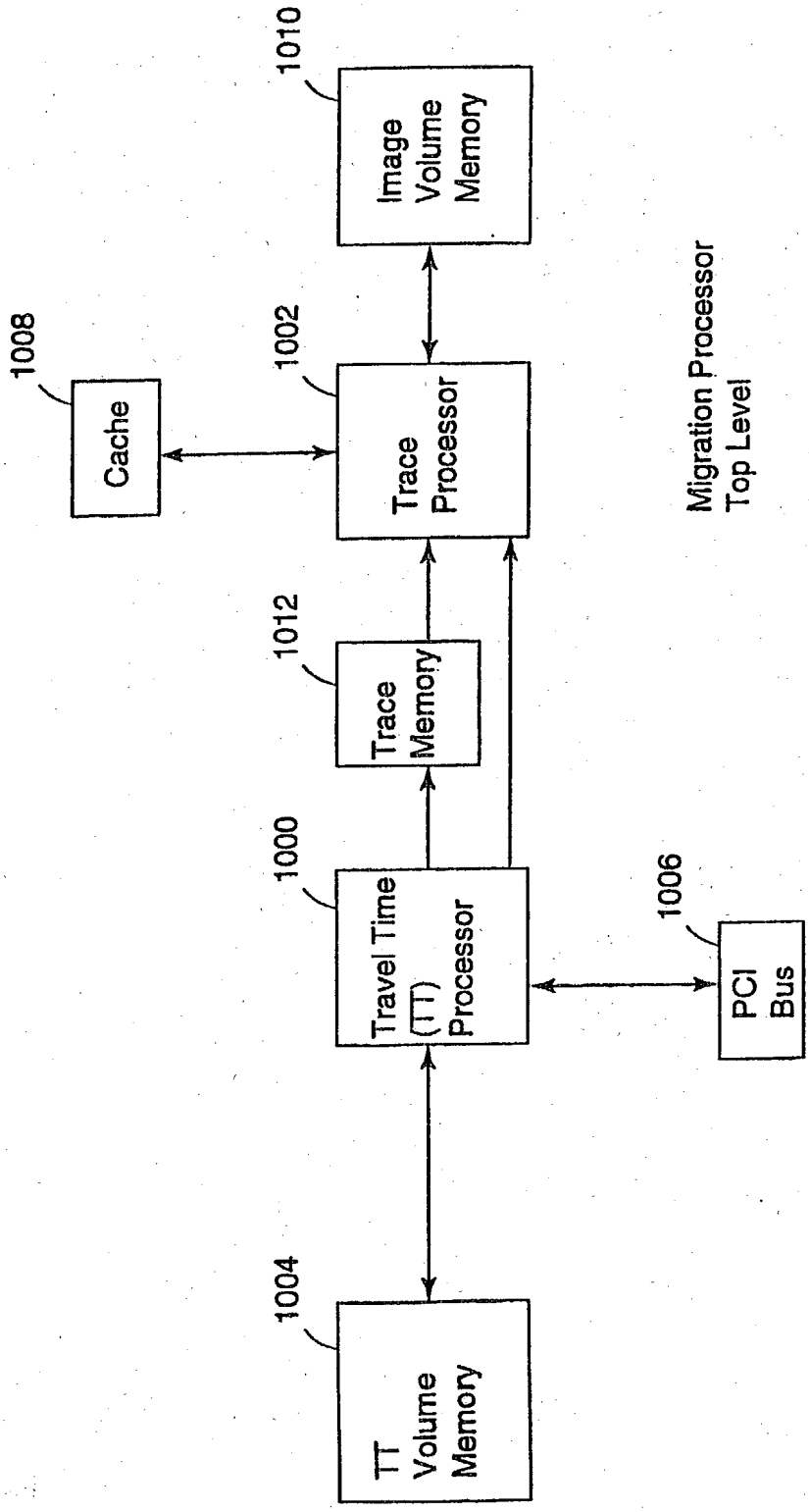

Fig. 36

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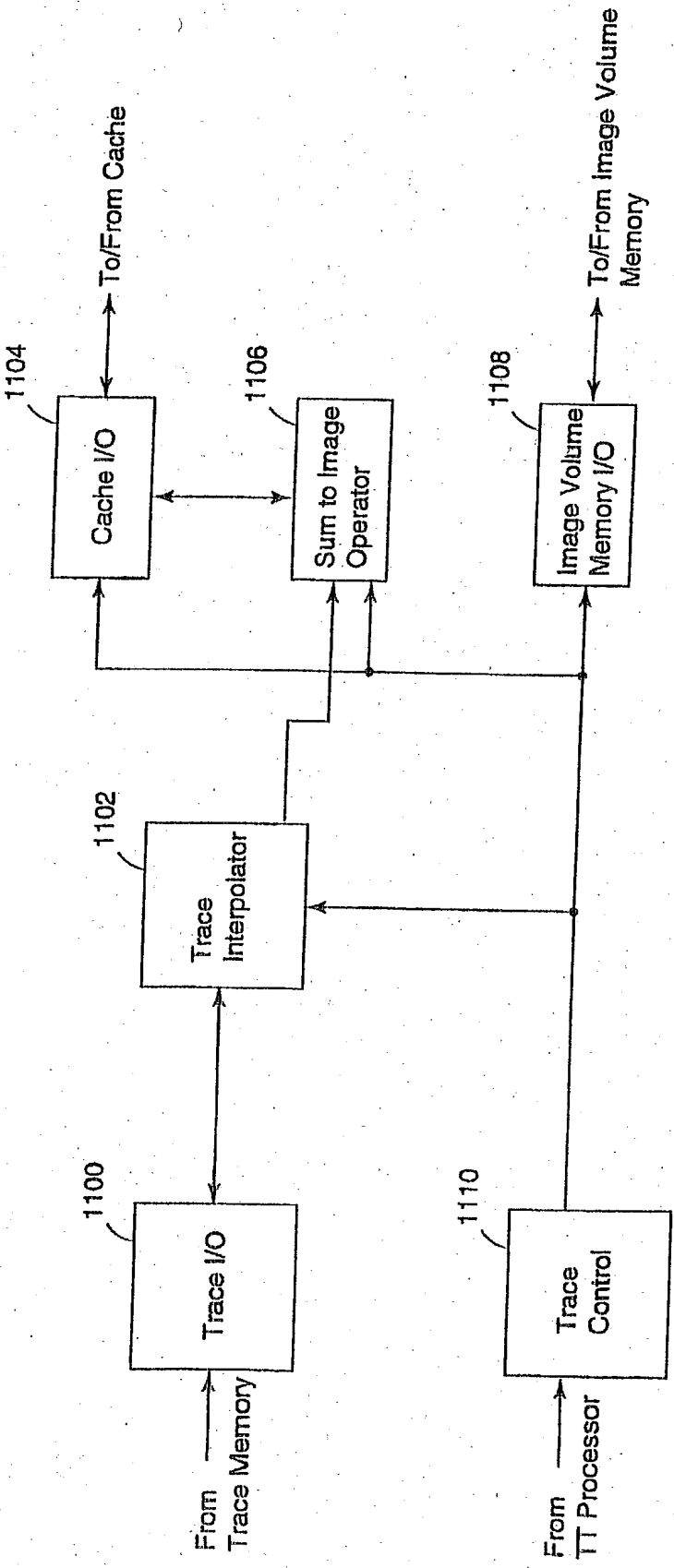

Fig. 37

Sheet: 31 of 34
Our Docket No.: CDT-3
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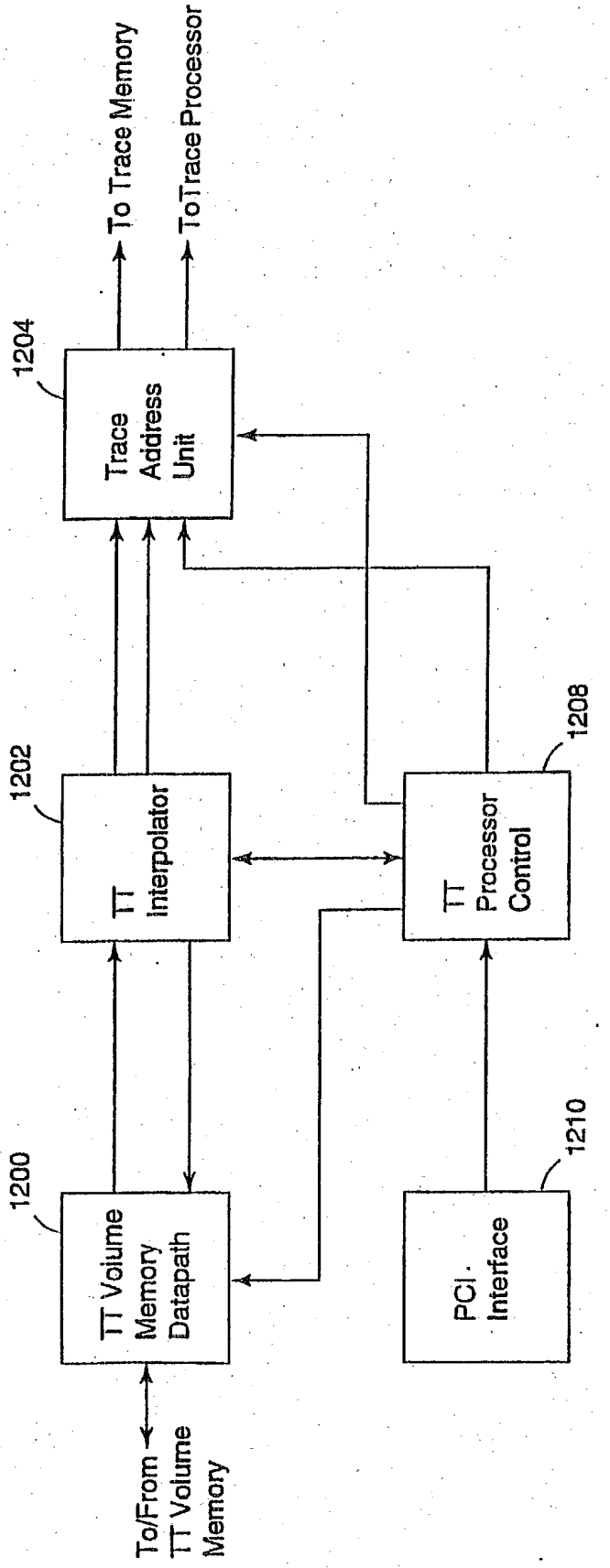

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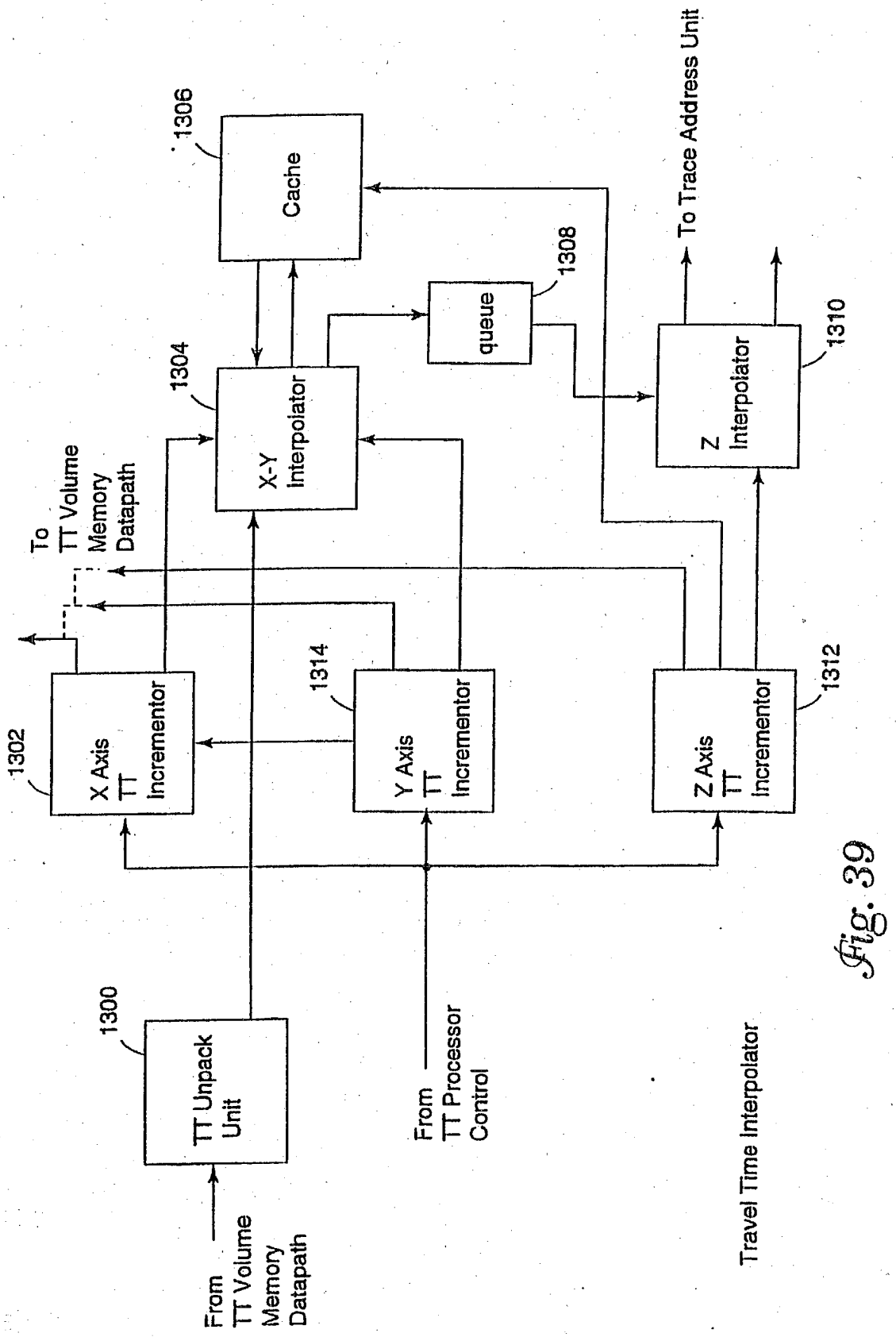

Fig. 39

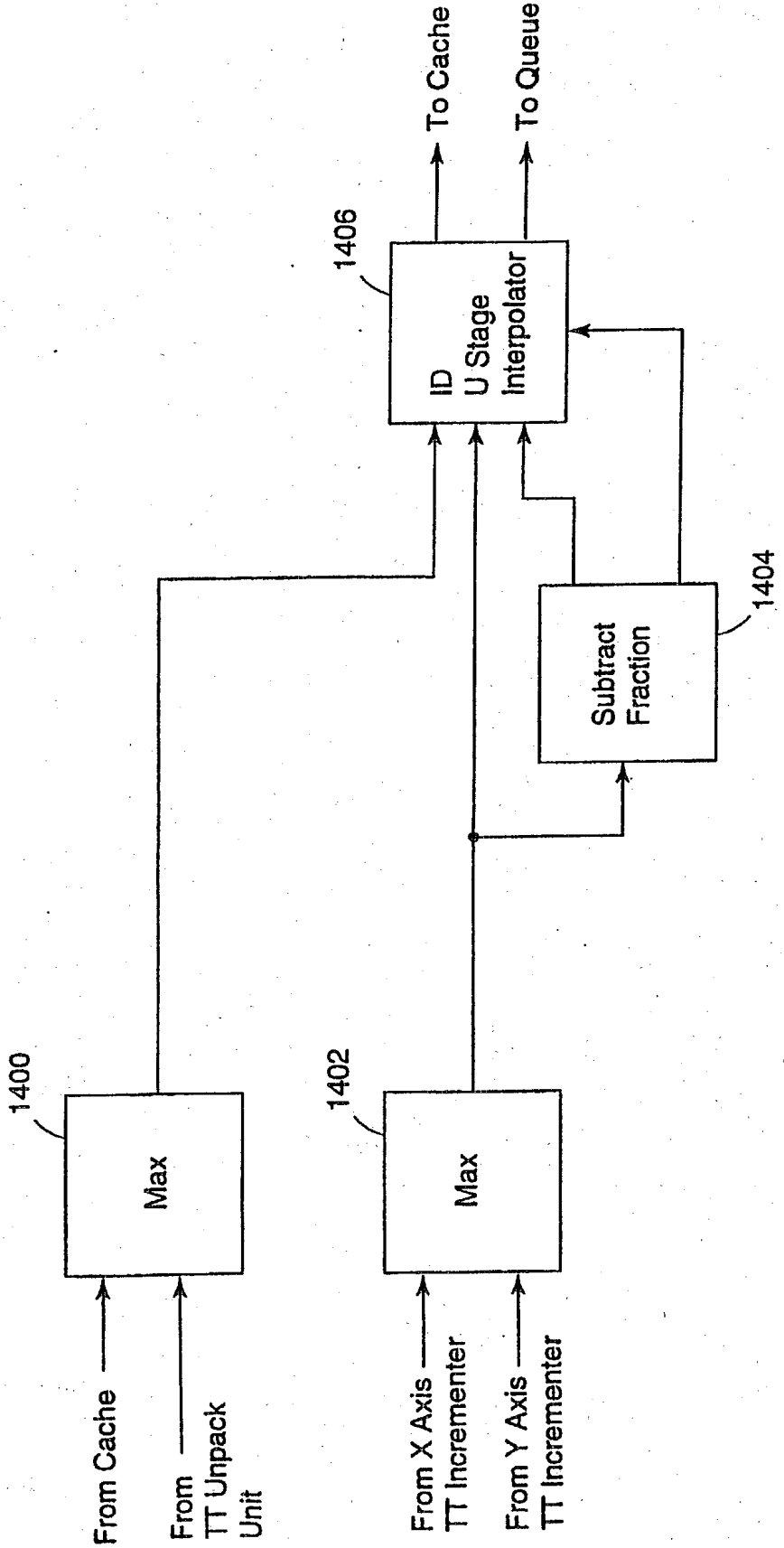

Fig. 40

Sheet: 34 of 34
Our Docket No: 9DT-3
Contact: Brown & Michaels
Phone: (607)-256-2000
Fax: (607)-256-3628

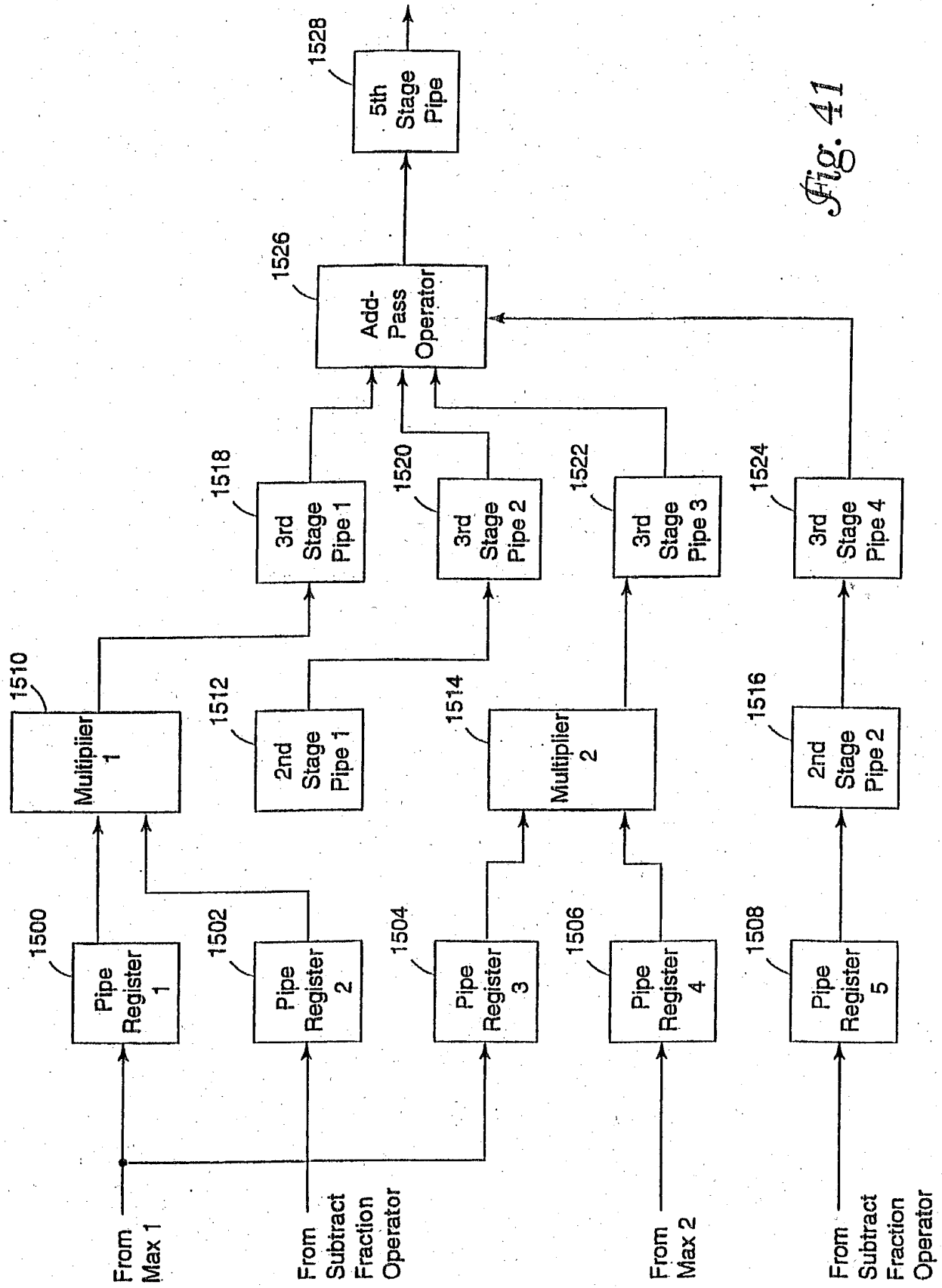

Fig. 41